```
=> fil capl; d que l1; d que l5; d que l25
FILE 'CAPLUS' ENTERED AT 13:05:44 ON 03 FEB 2006
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FILE COVERS 1907 - 3 Feb 2006  VOL 144 ISS 7
FILE LAST UPDATED: 2 Feb 2006  (20060202/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
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http://www.cas.org/infopolicy.html
'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE


L1             1 SEA FILE=CAPLUS ABB=ON  US2003-630143/AP


L2           363 SEA FILE=CAPLUS ABB=ON  HUNTER K?/AU
L3           110 SEA FILE=CAPLUS ABB=ON  GAULT R?/AU
L4           339 SEA FILE=CAPLUS ABB=ON  JORDAN F?/AU
L5             3 SEA FILE=CAPLUS ABB=ON  L2 AND L3 AND L4


L2           363 SEA FILE=CAPLUS ABB=ON  HUNTER K?/AU
L3           110 SEA FILE=CAPLUS ABB=ON  GAULT R?/AU
L4           339 SEA FILE=CAPLUS ABB=ON  JORDAN F?/AU
L6             1 SEA FILE=REGISTRY ABB=ON  CHITIN/CN
L7             1 SEA FILE=REGISTRY ABB=ON  N-ACETYLGLUCOSAMINE/CN
L8             1 SEA FILE=REGISTRY ABB=ON  37361-00-5
L9             2 SEA FILE=REGISTRY ABB=ON  "B-D-GLUCAN, (1.FWDARW.3)-"/CN
L10            2 SEA FILE=REGISTRY ABB=ON  GLUCOSE/CN
L11         9870 SEA FILE=CAPLUS ABB=ON  GLUCAN#/OBI
L12         2385 SEA FILE=CAPLUS ABB=ON  L8 OR L9
L13       185348 SEA FILE=CAPLUS ABB=ON  L10
L14         8812 SEA FILE=CAPLUS ABB=ON  L6
L15          457 SEA FILE=CAPLUS ABB=ON  L7/D
L16            8 SEA FILE=CAPLUS ABB=ON  (L2 OR L3 OR L4) AND (L11 OR L12)
L17       117300 SEA FILE=CAPLUS ABB=ON  T/OBI(L)(CELL# OR LYMPHOCYTE#)/CW
L18        15587 SEA FILE=CAPLUS ABB=ON  IMMUNOSTIMULANTS/CT
L19        12883 SEA FILE=CAPLUS ABB=ON  B7#/BI
L20        18994 SEA FILE=CAPLUS ABB=ON  ADJUVANT#/OBI
L21        48414 SEA FILE=CAPLUS ABB=ON  IMMUNITY/CT
L22         9283 SEA FILE=CAPLUS ABB=ON  IMMUNIZATION/CT
L23        46764 SEA FILE=CAPLUS ABB=ON  VACCINES/CT
L24         8960 SEA FILE=CAPLUS ABB=ON  IMMUNOMODULATORS/CT
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inventor search

Searched by Barb O'Bryen, STIC 2-2518

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L25             5 SEA FILE=CAPLUS ABB=ON  L16 AND ((L17 OR L18 OR L19 OR L20 OR
                  L21 OR L22 OR L23 OR L24) OR (L13 OR L14 OR L15))


=> s l1 or l5 or l25

L177            5 L1 OR L5 OR L25

=> fil medl; d que l46; d que l52

FILE 'MEDLINE' ENTERED AT 13:05:46 ON 03 FEB 2006

 FILE LAST UPDATED: 2 FEB 2006 (20060202/UP).  FILE COVERS 1950 TO DATE.

 On December 11, 2005, the 2006 MeSH terms were loaded.

 The MEDLINE reload for 2006 will soon be available.  For details
 on the 2005 reload, enter HELP RLOAD at an arrow promt (=>).
 See also:

    http://www.nlm.nih.gov/mesh/
    http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
    http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
    http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

 OLDMEDLINE is covered back to 1950.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2006 vocabulary.

 This file contains CAS Registry Numbers for easy and accurate


L43           383 SEA FILE=MEDLINE ABB=ON  HUNTER K?/AU
L44            19 SEA FILE=MEDLINE ABB=ON  GAULT R?/AU
L45           301 SEA FILE=MEDLINE ABB=ON  JORDAN F?/AU
L46             2 SEA FILE=MEDLINE ABB=ON  L44 AND (L43 OR L45)



L43           383 SEA FILE=MEDLINE ABB=ON  HUNTER K?/AU
L44            19 SEA FILE=MEDLINE ABB=ON  GAULT R?/AU
L45           301 SEA FILE=MEDLINE ABB=ON  JORDAN F?/AU
L51          3885 SEA FILE=MEDLINE ABB=ON  BETA-GLUCANS/CT OR GLUCANS/CT
L52             4 SEA FILE=MEDLINE ABB=ON  (L43 OR L44 OR L45) AND L51


=> s l46 or l52

L178            5 L46 OR L52

=> fil embase; d que l75; d que l69

FILE 'EMBASE' ENTERED AT 13:05:47 ON 03 FEB 2006
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 FILE COVERS 1974 TO 2 Feb 2006 (20060202/ED)

 EMBASE has been reloaded. Enter HELP RLOAD for details.
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This file contains CAS Registry Numbers for easy and accurate substance identification.

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L8            1 SEA FILE=REGISTRY ABB=ON  37361-00-5
L9            2 SEA FILE=REGISTRY ABB=ON  "B-D-GLUCAN, (1.FWDARW.3)-"/CN
L66         287 SEA FILE=EMBASE ABB=ON  HUNTER K?/AU
L67          15 SEA FILE=EMBASE ABB=ON  GAULT R?/AU
L68         218 SEA FILE=EMBASE ABB=ON  JORDAN F?/AU
L70         886 SEA FILE=EMBASE ABB=ON  BETA GLUCAN/CT
L71         691 SEA FILE=EMBASE ABB=ON  (L8 OR L9)
L72         470 SEA FILE=EMBASE ABB=ON  BETA 1,3 GLUCAN/CT
L73          38 SEA FILE=EMBASE ABB=ON  BETA 1,6 GLUCAN/CT
L75           1 SEA FILE=EMBASE ABB=ON  (L66 OR L67 OR L68) AND (L70 OR L71 OR
                L72 OR L73)



L66         287 SEA FILE=EMBASE ABB=ON  HUNTER K?/AU
L67          15 SEA FILE=EMBASE ABB=ON  GAULT R?/AU
L68         218 SEA FILE=EMBASE ABB=ON  JORDAN F?/AU
L69           0 SEA FILE=EMBASE ABB=ON  L67 AND (L66 OR L68)


=> fil drugu; d que l97;d que l103

FILE 'DRUGU' ENTERED AT 13:05:48 ON 03 FEB 2006
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FILE LAST UPDATED: 31 JAN 2006       <20060131/UP>
>>>  DERWENT DRUG FILE (SUBSCRIBER)  <<<

>>>  FILE COVERS 1983 TO DATE  <<<
>>>  THESAURUS AVAILABLE IN /CT  <<<



L94          44 SEA FILE=DRUGU ABB=ON  HUNTER K?/AU
L95           2 SEA FILE=DRUGU ABB=ON  GAULT R?/AU
L96           7 SEA FILE=DRUGU ABB=ON  JORDAN F?/AU
L97           1 SEA FILE=DRUGU ABB=ON  (L95 OR L96) AND L94



L8            1 SEA FILE=REGISTRY ABB=ON  37361-00-5
L9            2 SEA FILE=REGISTRY ABB=ON  "B-D-GLUCAN, (1.FWDARW.3)-"/CN
L94          44 SEA FILE=DRUGU ABB=ON  HUNTER K?/AU
L95           2 SEA FILE=DRUGU ABB=ON  GAULT R?/AU
L96           7 SEA FILE=DRUGU ABB=ON  JORDAN F?/AU
L98          29 SEA FILE=DRUGU ABB=ON  (L8 OR L9)
L99          80 SEA FILE=DRUGU ABB=ON  GLUCAN-BETA-1,3/CT OR GLUCAN-BETA-1,3-D/
                CT
L100          2 SEA FILE=DRUGU ABB=ON  GLUCAN-BETA-1,6-D/CT
L101          4 SEA FILE=DRUGU ABB=ON  GLUCAN-BETA/CT
L103          0 SEA FILE=DRUGU ABB=ON  (L94 OR L95 OR L96) AND (L98 OR L99 OR
                L100 OR L101)


=> fil wpids; d que l115; d que l126
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FILE 'WPIDS' ENTERED AT 13:05:49 ON 03 FEB 2006
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FILE LAST UPDATED:          1 FEB 2006      <20060201/UP>
MOST RECENT DERWENT UPDATE:     200608        <200608/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
    PLEASE VISIT:
 http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<


>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
http://scientific.thomson.com/support/patents/coverage/latestupdates/

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER
    GUIDES, PLEASE VISIT:
http://scientific.thomson.com/support/products/dwpi/

>>> FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT
    DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX
    FIRST VIEW - FILE WPIFV.
    FOR FURTHER DETAILS:
http://scientific.thomson.com/support/products/dwpifv/

>>> THE CPI AND EPI MANUAL CODES WILL BE REVISED FROM UPDATE 200601.
    PLEASE CHECK:
http://scientific.thomson.com/support/patents/dwpiref/reftools/classification

>>> PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE
http://www.stn-international.de/stndatabases/details/ipc_reform.html  and
http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf <<<


L112         123 SEA FILE=WPIDS ABB=ON  HUNTER K?/AU
L113          24 SEA FILE=WPIDS ABB=ON  GAULT R?/AU
L114          68 SEA FILE=WPIDS ABB=ON  JORDAN F?/AU
L115           2 SEA FILE=WPIDS ABB=ON  L112 AND L113 AND L114



L112         123 SEA FILE=WPIDS ABB=ON  HUNTER K?/AU
L113          24 SEA FILE=WPIDS ABB=ON  GAULT R?/AU
L114          68 SEA FILE=WPIDS ABB=ON  JORDAN F?/AU
L116        2241 SEA FILE=WPIDS ABB=ON  GLUCAN#
L117        9860 SEA FILE=WPIDS ABB=ON  IMMUNE RESPONSE
L118       13730 SEA FILE=WPIDS ABB=ON  ADJUVANT#
L119        5852 SEA FILE=WPIDS ABB=ON  IMMUNOSTIMULA?
L120         436 SEA FILE=WPIDS ABB=ON  IMMUNOPOTENTIAT?
L121         483 SEA FILE=WPIDS ABB=ON  COSTIMULA? OR CO STIMULA?
L122        2049 SEA FILE=WPIDS ABB=ON  IMMUN#(W)(STIMULA? OR POTENTIAT? OR
                 MODULAT?)
L123        8323 SEA FILE=WPIDS ABB=ON  IMMUNOMODULAT?
L124        1232 SEA FILE=WPIDS ABB=ON  B7
L125       11598 SEA FILE=WPIDS ABB=ON  T(W)(CELL# OR LYMPHOCYTE#)
L126           2 SEA FILE=WPIDS ABB=ON  (L112 OR L113 OR L114) AND L116 AND
                 (L117 OR L118 OR L119 OR L120 OR L121 OR L122 OR L123 OR L124
                 OR L125)
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=> s l115 or l126

L179         2 L115 OR L126

=> fil biosis; d que l140; d que l143

FILE 'BIOSIS' ENTERED AT 13:05:52 ON 03 FEB 2006
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FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 1 February 2006 (20060201/ED)



L137        485 SEA FILE=BIOSIS ABB=ON  HUNTER K?/AU
L138         55 SEA FILE=BIOSIS ABB=ON  GAULT R?/AU
L139        415 SEA FILE=BIOSIS ABB=ON  JORDAN F?/AU
L140          1 SEA FILE=BIOSIS ABB=ON  L137 AND L138 AND L139



L8            1 SEA FILE=REGISTRY ABB=ON  37361-00-5
L9            2 SEA FILE=REGISTRY ABB=ON  "B-D-GLUCAN, (1.FWDARW.3)-"/CN
L137        485 SEA FILE=BIOSIS ABB=ON  HUNTER K?/AU
L138         55 SEA FILE=BIOSIS ABB=ON  GAULT R?/AU
L139        415 SEA FILE=BIOSIS ABB=ON  JORDAN F?/AU
L141        970 SEA FILE=BIOSIS ABB=ON  (L8 OR L9)
L142       5632 SEA FILE=BIOSIS ABB=ON  GLUCAN#(3A)BETA
L143          5 SEA FILE=BIOSIS ABB=ON  (L137 OR L138 OR L139) AND (L141 OR
                L142)


=> s l140 or l143

L180         6 L140 OR L143

=> fil stnguide

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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jan 27, 2006 (20060127/UP).

=> dup rem l178,l97,l177,l180,l75,l179
FILE 'MEDLINE' ENTERED AT 13:06:33 ON 03 FEB 2006

FILE 'DRUGU' ENTERED AT 13:06:33 ON 03 FEB 2006
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FILE 'BIOSIS' ENTERED AT 13:06:33 ON 03 FEB 2006

FILE 'EMBASE' ENTERED AT 13:06:33 ON 03 FEB 2006

FILE 'WPIDS' ENTERED AT 13:06:33 ON 03 FEB 2006

PROCESSING COMPLETED FOR L178
PROCESSING COMPLETED FOR L97
PROCESSING COMPLETED FOR L177
PROCESSING COMPLETED FOR L180
PROCESSING COMPLETED FOR L75
PROCESSING COMPLETED FOR L179
L181 11 DUP REM L178 L97 L177 L180 L75 L179 (9 DUPLICATES REMOVED)
ANSWERS '1-5' FROM FILE MEDLINE
ANSWERS '6-8' FROM FILE CAPLUS
ANSWERS '9-11' FROM FILE BIOSIS

=> d iall 1-5; d ibib ed abs hitind 6-8; d iall 9-11

L181 ANSWER 1 OF 11 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2005158213 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15790516
TITLE: IFN-gamma primes macrophages for enhanced TNF-alpha expression in response to stimulatory and non-stimulatory amounts of microparticulate beta-glucan.
AUTHOR: Berner Mathew D; Sura Michael E; Alves Bryce N; **Hunter Kenneth W Jr**
CORPORATE SOURCE: Department of Microbiology and Immunology, University of Nevada School of Medicine, Applied Research Facility, MS-199, Reno, NV 89557, USA.
SOURCE: Immunology letters, (2005 Apr 15) 98 (1) 115-22.
Electronic Publication: 2004-11-24.
Journal code: 7910006. ISSN: 0165-2478.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200507
ENTRY DATE: Entered STN: 20050326
Last Updated on STN: 20050727
Entered Medline: 20050726

ABSTRACT:
beta-(1-->3)-D-Glucan is an integral cell wall component of a variety of fungi, plants, and bacteria. Like the prototypic inflammatory mediator lipopolysaccharide (LPS), some beta-(1--> 3)-D-glucan-containing preparations have been shown to induce the production of proinflammatory cytokines by macrophages. In the present study, we have tested a new microparticulate form of beta-(1--> 3)-D-glucan (MG) from Saccharomyces cerevisiae for its ability to induce proinflammatory cytokine secretion in mouse peritoneal macrophages in vitro, and we have examined the effect of IFN-gamma. MG was rapidly phagocytized by peritoneal macrophages, and these MG-treated macrophages upregulated TNF-alpha, IL-6, and IL-1beta mRNAs and secreted these proinflammatory cytokines. IFN-gamma treatment alone did not induce unstimulated macrophages to produce TNF-alpha. However, a 4 h IFN-gamma pretreatment augmented TNF-alpha secretion by peritoneal macrophages subsequently treated with an optimally stimulatory dose of MG. IFN-gamma pretreatment for 2 h followed by thorough washing and a further 2 h incubation without IFN-gamma still resulted in enhanced TNF-alpha production in response

to MG, suggesting that IFN-gamma can prime macrophages for a subsequent proinflammatory response. Most interestingly, we found that IFN-gamma pretreatment of peritoneal macrophages enhanced the TNF-alpha response to amounts of MG that were poorly stimulatory or non-stimulatory in the absence of IFN-gamma priming. These data suggest that a synergy between IFN-gamma and beta-glucan may have evolved to lower the threshold of sensitivity of the innate immune response to fungal pathogens.

CONTROLLED TERM: Check Tags: Female
Animals
Cytokines: BI, biosynthesis
Cytokines: GE, genetics
Cytokines: SE, secretion
Gene Expression Regulation: PH, physiology
*Interferon Type II: ME, metabolism
Lipopolysaccharides: ME, metabolism
*Macrophages, Peritoneal: ME, metabolism
Macrophages, Peritoneal: SE, secretion
Mice
Mice, Inbred BALB C
Phagocytosis: PH, physiology
RNA, Messenger: ME, metabolism
Research Support, Non-U.S. Gov't
Tumor Necrosis Factor-alpha: GE, genetics
*Tumor Necrosis Factor-alpha: ME, metabolism
***beta-Glucans: ME, metabolism**

CAS REGISTRY NO.: 82115-62-6 (Interferon Type II)

CHEMICAL NAME: 0 (Cytokines); 0 (Lipopolysaccharides); 0 (RNA, Messenger); 0 (Tumor Necrosis Factor-alpha); 0 (beta-1,3-D-glucan); 0 (beta-Glucans)

L181 ANSWER 2 OF 11 MEDLINE on STN DUPLICATE 3

ACCESSION NUMBER: 2004237405 MEDLINE

DOCUMENT NUMBER: PubMed ID: 15134902

TITLE: Microparticulate beta-glucan upregulates the expression of B7.1, B7.2, B7-H1, but not B7-DC on cultured murine peritoneal macrophages.

AUTHOR: **Hunter Kenneth W Jr**; DuPre' Sally; Redelman Doug

CORPORATE SOURCE: Department of Microbiology and Immunology, University of Nevada School of Medicine, Reno, NV 89557, USA..
khunter@unr.edu

CONTRACT NUMBER: P20 RR16464 (NCRR)

SOURCE: Immunology letters, (2004 Apr 30) 93 (1) 71-8.
Journal code: 7910006. ISSN: 0165-2478.

PUB. COUNTRY: Netherlands

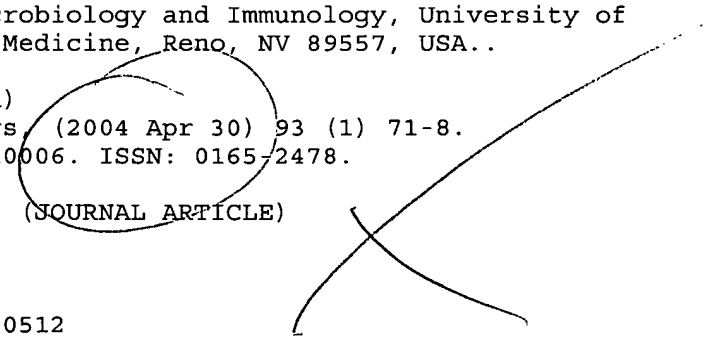
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200412

ENTRY DATE: Entered STN: 20040512
Last Updated on STN: 20041222
Entered Medline: 20041221



ABSTRACT:
Beta-1,3-(D)-glucan from a variety of biological sources has been shown to enhance both humoral and cellular immune responses to a variety of antigens, infectious agents, and tumors. Nevertheless, its mode of action has not been fully defined. We sought to determine whether a 1-2 microm diameter microparticulate form of beta-glucan (MG) from the yeast Saccharomyces cerevisiae could regulate expression of B7 family glycoproteins on resident peritoneal macrophages from BALB/c mice. We discovered that MG uregulated B7.2 mRNA expression and enhanced the surface membrane expression of B7.2

glycoprotein. Although B7.1 mRNA was not upregulated above constitutive levels, MG treatment enhanced B7.1 glycoprotein expression on the macrophages, albeit to a lesser extent than B7.2. At the same time, the gene and cell surface expression of B7-H1, a putative negative regulator of T cell activity, was also upregulated by MG. The expression of B7-DC, another B7 family molecule with negative regulatory activity, was not affected by incubation with MG. This study has demonstrated that a microparticulate form of beta-glucan can enhance B7 co-stimulatory molecule expression on macrophages, thereby enabling these antigen-presenting cells to deliver the second signal to T-lymphocytes that express CD28. In addition, because MG also induces the expression of B7-H1, it may enable macrophages to provide a concomitant downregulatory signal to T-lymphocytes expressing PD-1 or related receptors.

CONTROLLED TERM: Check Tags: Female
Animals
Antigens, CD: GE, genetics
*Antigens, CD: IM, immunology
Antigens, CD: ME, metabolism
Antigens, CD80: GE, genetics
*Antigens, CD80: IM, immunology
Antigens, CD80: ME, metabolism
Blood Proteins: GE, genetics
*Blood Proteins: IM, immunology
Blood Proteins: ME, metabolism
Gene Expression Regulation: PH, physiology
*Macrophages, Peritoneal: IM, immunology
Membrane Glycoproteins: GE, genetics
*Membrane Glycoproteins: IM, immunology
Membrane Glycoproteins: ME, metabolism
Mice
Peptides: GE, genetics
*Peptides: IM, immunology
Peptides: ME, metabolism
RNA, Messenger: ME, metabolism
Research Support, Non-U.S. Gov't
Research Support, U.S. Gov't, P.H.S.
Reverse Transcriptase Polymerase Chain Reaction
Up-Regulation
***beta-Glucans: ME, metabolism**

CHEMICAL NAME: 0 (Antigens, CD); 0 (Antigens, CD80); 0 (B7-DC antigen); 0 (Blood Proteins); 0 (CD86 antigen); 0 (Membrane Glycoproteins); 0 (PDCD1LG1 protein, human); 0 (Peptides); 0 (RNA, Messenger); 0 (beta-1,3-D-glucan); 0 (beta-Glucans)

L181 ANSWER 3 OF 11 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 2003021273 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12526860
TITLE: Synthesis of cetyl myristoleate and evaluation of its therapeutic efficacy in a murine model of collagen-induced arthritis.
AUTHOR: **Hunter Kenneth W Jr; Gault Ruth A;** Stehouwer Jeffrey S; Tam-Chang Suk-Wah
CORPORATE SOURCE: Department of Microbiology, University of Nevada School of Medicine, Reno, NV 89557, USA.. khunter@unr.edu
SOURCE: Pharmacological research : official journal of the Italian Pharmacological Society, (2003 Jan) 47 (1) 43-7. Journal code: 8907422. ISSN: 1043-6618.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals

ENTRY MONTH: 200310
ENTRY DATE: Entered STN: 20030116
Last Updated on STN: 20031008
Entered Medline: 20031006

ABSTRACT:
Cetyl myristoleate (CM) was reported by Diehl and May [J Pharm Sci 83 (1994) 296] to block inflammation and prevent adjuvant-induced arthritis in rats. To verify this earlier work, we have synthesized pure CM and tested its anti-arthritic properties in a collagen-induced arthritis model in DBA/1LacJ mice. Multiple intraperitoneal injections of CM in 450 and 900 mg kg(-1) doses resulted in a significantly lower incidence of disease and caused a modest but significant diminution in clinical signs in those mice that developed arthritis. CM administered in daily oral doses of 20 mg kg(-1) also reduced the incidence of arthritis and caused a small reduction in the clinical signs in mice that developed arthritis. Although the protective effect of CM in collagen-induced arthritis observed in the present study was less dramatic than that reported earlier, our results confirm the anti-arthritic properties of pure CM.

CONTROLLED TERM: Check Tags: Comparative Study; Female
Animals
*Arthritis, Experimental: DT, drug therapy
Arthritis, Experimental: PA, pathology
*Disease Models, Animal
Drug Evaluation, Preclinical: MT, methods
Mice
Mice, Inbred DBA
Research Support, Non-U.S. Gov't
*Waxes: CS, chemical synthesis
*Waxes: TU, therapeutic use
CAS REGISTRY NO.: 64660-84-0 (cetyl myristoleate)
CHEMICAL NAME: 0 (Waxes)

L181 ANSWER 4 OF 11 MEDLINE on STN DUPLICATE 6
ACCESSION NUMBER: 2002498220 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12358685
TITLE: Preparation of microparticulate beta-glucan from Saccharomyces cerevisiae for use in immune potentiation.
AUTHOR: **Hunter K W Jr**; **Gault R A**; Berner M D
CORPORATE SOURCE: Department of Microbiology, University of Nevada School of Medicine, Reno, NV 89557, USA.. khunter@unr.edu
SOURCE: Letters in applied microbiology, (2002) 35 (4) 267-71.
Journal code: 8510094. ISSN: 0266-8254.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200212
ENTRY DATE: Entered STN: 20021003
Last Updated on STN: 20021217
Entered Medline: 20021204

ABSTRACT:
AIMS: To develop a method for the preparation of an immunologically active, homogeneous, nonaggregated, microparticulate beta-glucan-containing material from the budding yeast Saccharomyces cerevisiae. METHODS AND RESULTS: Using a combination of sonication and spray-drying, a homogeneous preparation of 1-2-mu diameter beta-glucan-containing particles was made from alkali- and acid-insoluble yeast cell wall material. This microparticulate beta-glucan remained in suspension longer and, following oral administration at 0.1 mg kg(-1) for 14 d, enhanced phagocytosis of mouse peritoneal macrophages significantly better than did aggregated beta-glucan particles. CONCLUSIONS: A

new sonication and spray-drying method can be employed to overcome the problem of aggregation of beta-glucan microparticles in aqueous media. SIGNIFICANCE AND IMPACT OF THE STUDY: A microparticulate form of beta-glucan that remains in suspension longer for pharmaceutical applications and has superior immune potentiation characteristics has been developed.

CONTROLLED TERM: Check Tags: In Vitro
*Adjuvants, Immunologic: IP, isolation & purification
Adjuvants, Immunologic: PD, pharmacology
Animals
Glucans: IM, immunology
***Glucans: IP, isolation & purification**
Glucans: PD, pharmacology
Macrophages: DE, drug effects
Macrophages: IM, immunology
Mice
Mice, Inbred BALB C
Phagocytosis: DE, drug effects
Reagent Kits, Diagnostic
Research Support, Non-U.S. Gov't
*Saccharomyces cerevisiae: CH, chemistry
Sonication

CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Glucans); 0 (Reagent Kits, Diagnostic)

L181 ANSWER 5 OF 11 MEDLINE on STN
ACCESSION NUMBER: 97253676 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9099058
TITLE: The impact of non-endotoxin LAL-reactive materials on Limulus amebocyte lysate analyses.
AUTHOR: Cooper J F; Weary M E; **Jordan F T**
CORPORATE SOURCE: Charles River Endosafe, Charleston, South Carolina, USA.
SOURCE: PDA journal of pharmaceutical science and technology / PDA, (1997 Jan-Feb) 51 (1) 2-6. Ref: 32
Journal code: 9439538. ISSN: 1079-7440.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199707
ENTRY DATE: Entered STN: 19970721
Last Updated on STN: 19970721
Entered Medline: 19970703

ABSTRACT:
Limulus amebocyte lysate (LAL) is activated by bacterial endotoxins and certain glucans (beta-D-glucan, LAL-RM). The potential for conflicting inter-laboratory results for LAL tests exists because commercial LAL reagents are highly variable in response to LAL-reactive glucans. The nature of beta-D-glucan activation of LAL and means for rendering LAL non-responsive to glucan are reviewed to provide a background for resolving conflicting data. Kinetic LAL methods are particularly useful for screening materials potentially contaminated with glucan. The presence of beta-D-glucan in parenterals is uncommon and is likely limited to products exposed to microbial or cellulosic materials. A scheme is suggested for identifying LAL-reactive glucans and for LAL release-testing without glucan interference.

CONTROLLED TERM: **Glucans: AN, analysis**
Indicators and Reagents
*Limulus Test: MT, methods

CHEMICAL NAME: 0 (Glucans); 0 (Indicators and Reagents)

L181 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2004:120668 CAPLUS
DOCUMENT NUMBER: 140:162361
TITLE: compositions containing microparticulate β-1,3(6)- **glucan** and conjugates for use as vaccine **adjuvants**
INVENTOR(S): **Hunter, Kenneth W.; Jordan, Frank M. ; Gault, Ruth A.**
PATENT ASSIGNEE(S): Immusonic, Inc., USA
SOURCE: PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004012657	A2	20040212	WO 2003-US23741	20030730
WO 2004012657	A3	20040708		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-400377P P 20020801
ED Entered STN: 13 Feb 2004
AB A microparticulate beta-glucan is used as a vaccine adjuvant for animals and humans, binding to glucan receptors on a variety of phagocytic cells to enhance their immunol. functions. The particles contain about 1-10% partially deacetylated N-acetylglucosamine and are predominantly 0.3-3 μ in diameter, preferably 1 - 2 μ in diameter, to cause the expression of co-stimulatory mols. on antigen presenting cells (APC's). The microparticle upregulates the expression of the co-stimulatory mol. **B7** based upon such microparticles containing beta- (1,3) and beta (1,6) glucan.
IC ICM A61K
CC 15-2 (Immunochemistry)
Section cross-reference(s): 9, 63
ST beta **glucan** microparticulate vaccine **adjuvant**
B7 antigen presenting cell
IT **Vaccines**
(AIDS; compns. containing microparticulate β-1,3- or β-1,6- **glucan** and conjugates for use as vaccine **adjuvants**)
IT Antigens
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**B7**-3; compns. containing microparticulate β-1,3- or β-1,6- **glucan** and conjugates for use as vaccine **adjuvants**)
IT Hematopoiesis

(T-cell lymphopoiesis; compns. containing microparticulate β-1,3- or β-1,6- **glucan** and conjugates for use as vaccine **adjuvants**)

IT Macrophage
(activation; compns. containing microparticulate β-1,3- or β-1,6- **glucan** and conjugates for use as vaccine **adjuvants**)

IT **Immunostimulants**
(**adjuvants**; compns. containing microparticulate β-1,3- or β-1,6- **glucan** and conjugates for use as vaccine **adjuvants**)

IT **Vaccines**
(antimalarial; compns. containing microparticulate β-1,3- or β-1,6- **glucan** and conjugates for use as vaccine **adjuvants**)

IT Biochemical compounds
(co-stimulatory; compns. containing microparticulate β-1,3- or β-1,6- **glucan** and conjugates for use as vaccine **adjuvants**)

IT Amino group
Animal
Antigen-presenting cell
Dehydration, physiological
Drying
Freeze drying
Grinding (size reduction)
Human
Infection
Macrophage
Saccharomyces
Sonication
Spraying
Spraying apparatus
T cell (**lymphocyte**)
Vaccines
Veterinary medicine
Yeast
(compns. containing microparticulate β-1,3- or β-1,6- **glucan** and conjugates for use as vaccine **adjuvants**)

IT Antigens
CD80 (antigen)
CD86 (antigen)
Lipids, biological studies
Oligosaccharides, biological studies
Polysaccharides, biological studies
Proteins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. containing microparticulate β-1,3- or β-1,6- **glucan** and conjugates for use as vaccine **adjuvants**)

IT Lymphocyte
(effector cell; compns. containing microparticulate β-1,3- or β-1,6- **glucan** and conjugates for use as vaccine **adjuvants**)

IT Organelle
(globule; compns. containing microparticulate β-1,3- or β-1,6- **glucan** and conjugates for use as vaccine **adjuvants**)

IT Drug delivery systems
(liqs.; compns. containing microparticulate β-1,3- or β-1,6- **glucan** and conjugates for use as vaccine **adjuvants**)

IT Cell activation

Peritoneum
(macrophage; compns. containing microparticulate β-1,3- or β-1,6-**glucan** and conjugates for use as vaccine **adjuvants**)
IT Drug delivery systems
(microparticles; compns. containing microparticulate β-1,3- or β-1,6- **glucan** and conjugates for use as vaccine **adjuvants**)
IT Drug delivery systems
(particles; compns. containing microparticulate β-1,3- or β-1,6-**glucan** and conjugates for use as vaccine **adjuvants**)
IT Macrophage
(peritoneal; compns. containing microparticulate β-1,3- or β-1,6-**glucan** and conjugates for use as vaccine **adjuvants**)
IT Hydration, physiological
(rehydration; compns. containing microparticulate β-1,3- or β-1,6- **glucan** and conjugates for use as vaccine **adjuvants**)
IT Infection
(schistosomiasis; compns. containing microparticulate β-1,3- or β-1,6- **glucan** and conjugates for use as vaccine **adjuvants**)
IT Coating process
(spray; compns. containing microparticulate β-1,3- or β-1,6-**glucan** and conjugates for use as vaccine **adjuvants**)
IT Anti-AIDS agents
Antimalarials
(vaccines; compns. containing microparticulate β-1,3- or β-1,6-**glucan** and conjugates for use as vaccine **adjuvants**)
IT **50-99-7**, Glucose, biological studies **1398-61-4**, Chitin
2280-44-6D, D-Glucopyranose, β-1,3- and β-1,6- derivs.
7512-17-6D, N-Acetylglucosamine, partially deacetylated derivs.
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. containing microparticulate β-1,3- or β-1,6-**glucan** and conjugates for use as vaccine **adjuvants**)

L181 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 5
ACCESSION NUMBER: 2002:813870 CAPLUS
DOCUMENT NUMBER: 137:299970
TITLE: The use of beta-1,3-**glucan**-containing compositions to potentiate immune responses by upregulating the expression of costimulatory molecules
INVENTOR(S): **Hunter, Kenneth W.; Gault, Ruth A. ; Jordan, Frank M.**
PATENT ASSIGNEE(S): Immusonic, Inc., USA
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002083061	A2	20021024	WO 2001-US43711	20011106
WO 2002083061	A3	20030103		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,

RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 6476003 B1 20021105 US 2000-707583 20001106
PRIORITY APPLN. INFO.: US 2000-707436 A 20001106
US 2000-707437 A 20001106
US 2000-707582 A 20001106
US 2000-707583 A 20001106

ED Entered STN: 25 Oct 2002

AB An improved method and immunopharmacol. composition for upregulating the expression of the co-stimulatory mol. **B7** is provided. A β-1,3-glucan-containing composition is provided that can upregulate the cell surface expression of **B7** mols. on antigen presenting cells like macrophages, thereby allowing these antigen presenting cells to more effectively initiate adaptive immune responses to foreign antigens like pathogenic microorganisms and tumors.

IC ICM A61K

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1

ST **glucan B7** antigen upregulation immunostimulant tumor microorganism

IT Antibodies and Immunoglobulins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(IgM; use of β-1,3- **glucan**-containing compns. to potentiate immune responses by upregulating expression of costimulatory mols.)

IT Respiration, animal
(burst; use of β-1,3- **glucan**-containing compns. to potentiate immune responses by upregulating expression of costimulatory mols.)

IT Drug delivery systems
(capsules; use of β-1,3- **glucan**-containing compns. to potentiate immune responses by upregulating expression of costimulatory mols.)

IT **T cell** (**lymphocyte**)
(effector; use of β-1,3- **glucan**-containing compns. to potentiate immune responses by upregulating expression of costimulatory mols.)

IT Drug delivery systems
(globules; use of β-1,3- **glucan**-containing compns. to potentiate immune responses by upregulating expression of costimulatory mols.)

IT Drug delivery systems
(liqs.; use of β-1,3- **glucan**-containing compns. to potentiate immune responses by upregulating expression of costimulatory mols.)

IT Cell differentiation
(lymphocyte; use of β-1,3- **glucan**-containing compns. to potentiate immune responses by upregulating expression of costimulatory mols.)

IT Peritoneum
(macrophage; use of β-1,3- **glucan**-containing compns. to potentiate immune responses by upregulating expression of costimulatory mols.)

IT Macrophage
(peritoneal; use of β-1,3- **glucan**-containing compns. to potentiate immune responses by upregulating expression of costimulatory mols.)

IT Drug delivery systems
(powders; use of β-1,3- **glucan**-containing compns. to potentiate immune responses by upregulating expression of costimulatory

mols.)
IT Drug delivery systems
(tablets; use of β-1,3- **glucan**-containing compns. to potentiate immune responses by upregulating expression of costimulatory mols.)
IT CD80 (antigen)
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(upregulation of expression of; use of β-1,3- **glucan** -containing compns. to potentiate immune responses by upregulating expression of costimulatory mols.)
IT B cell (lymphocyte)
Dendritic cell
Immunostimulants
Macrophage
Particle size
Phagocytosis
Sonication
(use of β-1,3- **glucan**-containing compns. to potentiate immune responses by upregulating expression of costimulatory mols.)
IT Microorganism
Neoplasm
(use of β-1,3- **glucan**-containing compns. to potentiate immune responses to microorganisms and tumor by upregulating expression of costimulatory mols.)
IT **9051-97-2 37361-00-5**, β-1,6- **Glucan**
RL: DMA (Drug mechanism of action); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(use of β-1,3- **glucan**-containing compns. to potentiate immune responses by upregulating expression of costimulatory mols.)

L181 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:533968 CAPLUS
DOCUMENT NUMBER: 141:70241
TITLE: Compositions comprising β(1,3)- **glucans** and β(1,6)- **glucans** for use as vaccine **adjuvant** and methods of manufacturing β- **glucans**
INVENTOR(S): **Hunter, Kenneth W.; Gault, Ruth A. ; Jordan, Frank M.**
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 26 pp., Cont.-in-part of U.S. Ser. No. 707,582.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004127458	A1	20040701	US 2003-630143		20030730 <--
PRIORITY APPLN. INFO.:			US 2000-707582	A2	20001106
			US 2002-400377P	P	20020801

ED Entered STN: 02 Jul 2004
AB A microparticulate beta-glucan is used as a vaccine adjuvant for animals and humans, binding to glucan receptors on a variety of phagocytic cells to enhance their immunol. functions. The particles contain about 1-10% partially deacetylated N-acetylglucosamine and are predominantly 0.3-3 μ in diameter, preferably 1-2 μ in diameter, to cause the expression of co-stimulatory mols. on antigen presenting cells (APC's). The

microparticle upregulates the expression of the co-stimulatory mol. **B7**, based upon such microparticles containing beta-(1,3) and beta(1,6) glucan.

IC ICM A61K031-715
INCL 514054000
CC 15-2 (Immunochemistry)
Section cross-reference(s): 63
ST beta **glucan** vaccine **adjuvant** antigen conjugate microparticle phagocyte APC
IT Antigens
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**B7**.3; compns. comprising β(1,3)- **glucans** and β(1,6)- **glucans** for use as vaccine **adjuvant** and methods of manufacturing β- **glucans**)
IT Hematopoiesis
(T-cell lymphopoiesis; compns. comprising β(1,3)- **glucans** and β(1,6)- **glucans** for use as vaccine **adjuvant** and methods of manufacturing β- **glucans**)
IT Macrophage
(activation; compns. comprising β(1,3)- **glucans** and β(1,6)- **glucans** for use as vaccine **adjuvant** and methods of manufacturing β- **glucans**)
IT **Immunostimulants**
(**adjuvants**; compns. comprising β(1,3)- **glucans** and β(1,6)- **glucans** for use as vaccine **adjuvant** and methods of manufacturing β- **glucans**)
IT Molecules
(co-stimulatory; compns. comprising β(1,3)- **glucans** and β(1,6)- **glucans** for use as vaccine **adjuvant** and methods of manufacturing β- **glucans**)
IT Amino group
Animal
Antigen-presenting cell
Grinding (size reduction)
Human
Microparticles
Phagocyte
Signal transduction, biological
Sonication
Spraying apparatus
T cell (**lymphocyte**)
Vaccines
(compns. comprising β(1,3)- **glucans** and β(1,6)- **glucans** for use as vaccine **adjuvant** and methods of manufacturing β- **glucans**)
IT CD80 (antigen)
CD86 (antigen)
Gelatins, biological studies
Polysaccharides, biological studies
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. comprising β(1,3)- **glucans** and β(1,6)- **glucans** for use as vaccine **adjuvant** and methods of manufacturing β- **glucans**)
IT Antigens
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates; compns. comprising β(1,3)- **glucans** and β(1,6)- **glucans** for use as vaccine **adjuvant** and

methods of manufacturing β- **glucans**)
IT **T cell (lymphocyte)**
(effector cell; compns. comprising β(1,3)- **glucans** and β(1,6)- **glucans** for use as vaccine **adjuvant** and methods of manufacturing β- **glucans**)
IT Receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**glucan**; compns. comprising β(1,3)- **glucans** and β(1,6)- **glucans** for use as vaccine **adjuvant** and methods of manufacturing β- **glucans**)
IT Drug delivery systems
(microparticles; compns. comprising β(1,3)- **glucans** and β(1,6)- **glucans** for use as vaccine **adjuvant** and methods of manufacturing β- **glucans**)
IT Hydration, physiological
(rehydration, without reaggregation; compns. comprising β(1,3)- **glucans** and β(1,6)- **glucans** for use as vaccine **adjuvant** and methods of manufacturing β- **glucans**)
IT Particles
(small; compns. comprising β(1,3)- **glucans** and β(1,6)- **glucans** for use as vaccine **adjuvant** and methods of manufacturing β- **glucans**)
IT Drying
(without reaggregation; compns. comprising β(1,3)- **glucans** and β(1,6)- **glucans** for use as vaccine **adjuvant** and methods of manufacturing β- **glucans**)
IT **1398-61-4**, Chitin **7512-17-6D**, N-Acetylglucosamine, deacylated derivs. **9051-97-2D**, analogs **37361-00-5D**, β(1,6)- **Glucan**, analogs
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. comprising β(1,3)- **glucans** and β(1,6)- **glucans** for use as vaccine **adjuvant** and methods of manufacturing β- **glucans**)

L181 ANSWER 9 OF 11 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2003:32049 BIOSIS
DOCUMENT NUMBER: PREV200300032049
TITLE: Method for preparing small particle size glucan in a dry material.
AUTHOR(S): **Jordan, Frank M.** [Inventor, Reprint Author]; **Gault, Ruth A.** [Inventor]; **Hunter, Kenneth W.** [Inventor]
CORPORATE SOURCE: Reno, NV, USA
ASSIGNEE: Immusonic, Inc., Carson City, NV, USA
PATENT INFORMATION: US 6476003 20021105
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Nov 5 2002) Vol. 1264, No. 1. http://www.uspto.gov/web/menu/patdata.html. e-file. ISSN: 0098-1133 (ISSN print).
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 8 Jan 2003
Last Updated on STN: 8 Jan 2003
ABSTRACT:An improved method for purifying glucan to small particle size glucan and drying the glucan to a solid such that the glucan may be re-hydrated and maintain substantially maintain a particle size of one micron or less so that

it may be used in nutritional, pharmaceutical and pharmacological compositions where a dry material is desired such that a greater immunological benefit may be obtained.
NAT. PATENT. CLASSIF.:514054000
CONCEPT CODE: Biochemistry studies - General 10060
Biochemistry studies - Carbohydrates 10068
INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics; Methods and Techniques
INDEX TERMS: Chemicals & Biochemicals
glucan: purification
INDEX TERMS: Methods & Equipment
small particle size glucan preparation: laboratory techniques
REGISTRY NUMBER: 9012-72-0 (glucan)

L181 ANSWER 10 OF 11 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2002:348087 BIOSIS
DOCUMENT NUMBER: PREV200200348087
TITLE: Methods and compositions for the detection of bacterial endotoxins.
AUTHOR(S): **Jordan, Foster T.** [Inventor, Reprint author]; Chiang, Hui-Ti [Inventor]; Cooper, James F. [Inventor]; Wainwright, Norman R. [Inventor]
CORPORATE SOURCE: Hollywood, SC, USA
ASSIGNEE: Charles River Laboratories
PATENT INFORMATION: US 6391570 20020521
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (May 21, 2002) Vol. 1258, No. 3. http://www.uspto.gov/web/menu/patdata.html. e-file. CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 19 Jun 2002
Last Updated on STN: 19 Jun 2002
ABSTRACT:The invention provides methods and compositions for the detection and/or quantification of bacterial endotoxins. In particular, provided herein is an inexpensive and reproducible method for producing an improved amebocyte lysate preparation having reduced Factor G activity. Provided also is an endotoxin-specific amebocyte lysate preparation produced by such a method. In addition, the invention provides methods and compositions akin for enhancing the sensitivity to endotoxins of amebocyte lysate preparations having reducing Factor G activity. In particular, the sensitivity of such amebocyte lysate preparations to endotoxins can be enhanced by the addition of exogenous (1fwdarw3) **beta-D-glucan.**
NAT. PATENT. CLASSIF.:435732000
CONCEPT CODE: Pathology - Diagnostic 12504
Pathology - Therapy 12512
Pharmacology - General 22002
Physiology and biochemistry of bacteria 31000
INDEX TERMS: Major Concepts
Methods and Techniques; Pharmacology
INDEX TERMS: Chemicals & Biochemicals
Factor G; bacterial endotoxin detection compositions: diagnostic-drug; bacterial endotoxins; **beta**-D-**glucan**
INDEX TERMS: Methods & Equipment
bacterial endotoxin detection: detection method
ORGANISM: Classifier

Searched by Barb O'Bryen, STIC 2-2518

Bacteria 05000
Super Taxa
Microorganisms
Organism Name
bacteria
Taxa Notes
Bacteria, Eubacteria, Microorganisms
REGISTRY NUMBER: 23297-71-4 (Factor G)
9041-22-9 (**beta**-D-**glucan**)

L181 ANSWER 11 OF 11 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2001:457213 BIOSIS
DOCUMENT NUMBER: PREV200100457213
TITLE: Methods and compositions for the detection of bacterial endotoxins.
AUTHOR(S): **Jordan, Foster T.** [Inventor, Reprint author]; Chiang, Hui-Ti [Inventor]; Cooper, James F. [Inventor]; Wainwright, Norman R. [Inventor]
CORPORATE SOURCE: Hollywood, SC, USA
ASSIGNEE: Charles River Laboratories, Wilmington, MA, USA
PATENT INFORMATION: US 6270982 20010807
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Aug. 7, 2001) Vol. 1249, No. 1. e-file. CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 26 Sep 2001
Last Updated on STN: 22 Feb 2002

ABSTRACT:The invention provides methods and compositions for the detection and/or quantification of bacterial endotoxins. In particular, provided herein is an inexpensive and reproducible method for producing an improved amebocyte lysate preparation having reduced Factor G activity. Provided also is an endotoxin-specific amebocyte lysate preparation produced by such a method. In addition, the invention provides methods and compositions for enhancing the sensitivity to endotoxins of amebocyte lysate preparations having reducing Factor G activity. In particular, the sensitivity of such amebocyte lysate preparations to endotoxins can be enhanced by the addition of exogenous (1fwdarw3) **beta**-D-**glucan.**

NAT. PATENT. CLASSIF.:435732000
CONCEPT CODE: General biology - Miscellaneous 00532
INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics; Methods and Techniques
INDEX TERMS: Chemicals & Biochemicals
amebocyte lysate preparation: reduced Factor G activity; bacterial endotoxins; exogenous (1-FAR3) **beta** -D-**glucan.**
INDEX TERMS: Methods & Equipment
bacterial endotoxin detection: detection method; bacterial endotoxin quantification: quantification method

=> =>

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=> fil capl; d que l28; d que l31; d que l42
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L7             1 SEA FILE=REGISTRY ABB=ON  N-ACETYLGLUCOSAMINE/CN
L8             1 SEA FILE=REGISTRY ABB=ON  37361-00-5
L9             2 SEA FILE=REGISTRY ABB=ON  "B-D-GLUCAN, (1.FWDARW.3)-"/CN
L10            2 SEA FILE=REGISTRY ABB=ON  GLUCOSE/CN
L11         9870 SEA FILE=CAPLUS ABB=ON  GLUCAN#/OBI
L12         2385 SEA FILE=CAPLUS ABB=ON  L8 OR L9
L13       185348 SEA FILE=CAPLUS ABB=ON  L10
L14         8812 SEA FILE=CAPLUS ABB=ON  L6
L15          457 SEA FILE=CAPLUS ABB=ON  L7/D
L17       117300 SEA FILE=CAPLUS ABB=ON  T/OBI(L)(CELL# OR LYMPHOCYTE#)/CW
L18        15587 SEA FILE=CAPLUS ABB=ON  IMMUNOSTIMULANTS/CT
L19        12883 SEA FILE=CAPLUS ABB=ON  B7#/BI
L20        18994 SEA FILE=CAPLUS ABB=ON  ADJUVANT#/OBI
L21        48414 SEA FILE=CAPLUS ABB=ON  IMMUNITY/CT
L22         9283 SEA FILE=CAPLUS ABB=ON  IMMUNIZATION/CT
L23        46764 SEA FILE=CAPLUS ABB=ON  VACCINES/CT
L24         8960 SEA FILE=CAPLUS ABB=ON  IMMUNOMODULATORS/CT
L26           53 SEA FILE=CAPLUS ABB=ON  (L11 OR L12) AND L13 AND (L14 OR L15)
L27          646 SEA FILE=CAPLUS ABB=ON  (L11 OR L12) AND (L17 OR L18 OR L19 OR
                 L20 OR L21 OR L22 OR L23 OR L24)
L28            3 SEA FILE=CAPLUS ABB=ON  L26 AND L27



L6             1 SEA FILE=REGISTRY ABB=ON  CHITIN/CN
L7             1 SEA FILE=REGISTRY ABB=ON  N-ACETYLGLUCOSAMINE/CN
L8             1 SEA FILE=REGISTRY ABB=ON  37361-00-5
L9             2 SEA FILE=REGISTRY ABB=ON  "B-D-GLUCAN, (1.FWDARW.3)-"/CN
L10            2 SEA FILE=REGISTRY ABB=ON  GLUCOSE/CN
L11         9870 SEA FILE=CAPLUS ABB=ON  GLUCAN#/OBI
L12         2385 SEA FILE=CAPLUS ABB=ON  L8 OR L9
```

```
L13      185348 SEA FILE=CAPLUS ABB=ON  L10
L14        8812 SEA FILE=CAPLUS ABB=ON  L6
L15         457 SEA FILE=CAPLUS ABB=ON  L7/D
L17      117300 SEA FILE=CAPLUS ABB=ON  T/OBI(L)(CELL# OR LYMPHOCYTE#)/CW
L18       15587 SEA FILE=CAPLUS ABB=ON  IMMUNOSTIMULANTS/CT
L19       12883 SEA FILE=CAPLUS ABB=ON  B7#/BI
L20       18994 SEA FILE=CAPLUS ABB=ON  ADJUVANT#/OBI
L21       48414 SEA FILE=CAPLUS ABB=ON  IMMUNITY/CT
L22        9283 SEA FILE=CAPLUS ABB=ON  IMMUNIZATION/CT
L23       46764 SEA FILE=CAPLUS ABB=ON  VACCINES/CT
L24        8960 SEA FILE=CAPLUS ABB=ON  IMMUNOMODULATORS/CT
L29        1576 SEA FILE=CAPLUS ABB=ON  (L11 OR L12)(L)(THU OR BAC OR PAC OR
                PKT OR DMA)/RL
L30          35 SEA FILE=CAPLUS ABB=ON  L29 AND L17 AND (L18 OR L19 OR L20 OR
                L21 OR L22 OR L23 OR L24)
L31           3 SEA FILE=CAPLUS ABB=ON  L30 AND (L13 OR L14 OR L15)
```

Roles

THU - therapeutic use
BAC - Biological activity
PAC - pharmacologic activity
PKT - pharmacokinetics
DMA - drug mechanism of action

```
L8            1 SEA FILE=REGISTRY ABB=ON  37361-00-5
L9            2 SEA FILE=REGISTRY ABB=ON  "B-D-GLUCAN, (1.FWDARW.3)-"/CN
L11        9870 SEA FILE=CAPLUS ABB=ON  GLUCAN#/OBI
L12        2385 SEA FILE=CAPLUS ABB=ON  L8 OR L9
L17      117300 SEA FILE=CAPLUS ABB=ON  T/OBI(L)(CELL# OR LYMPHOCYTE#)/CW
L18       15587 SEA FILE=CAPLUS ABB=ON  IMMUNOSTIMULANTS/CT
L19       12883 SEA FILE=CAPLUS ABB=ON  B7#/BI
L20       18994 SEA FILE=CAPLUS ABB=ON  ADJUVANT#/OBI
L29        1576 SEA FILE=CAPLUS ABB=ON  (L11 OR L12)(L)(THU OR BAC OR PAC OR
                PKT OR DMA)/RL
L34        3489 SEA FILE=CAPLUS ABB=ON  COSTIMULA?/OBI OR CO STIMULA?/OBI
L38         228 SEA FILE=CAPLUS ABB=ON  L29(L)(L19 OR L20 OR L34 OR IMMUN?/OBI)

L41      100847 SEA FILE=CAPLUS ABB=ON  LYMPHOCYTE#/CW(L)T/OBI
L42          12 SEA FILE=CAPLUS ABB=ON  L38 AND L17 AND L18 AND L41


=> s (l28 or l31 or l42)  not l177

L182         12 (L28 OR L31 OR L42)  NOT L177
```

previously printed w/ inventor search

```
=> fil medl; d que l56; d que l57; d que l65

FILE 'MEDLINE' ENTERED AT 13:09:16 ON 03 FEB 2006

 FILE LAST UPDATED: 2 FEB 2006 (20060202/UP).  FILE COVERS 1950 TO DATE.

 On December 11, 2005, the 2006 MeSH terms were loaded.

 The MEDLINE reload for 2006 will soon be available.  For details
 on the 2005 reload, enter HELP RLOAD at an arrow promt (=>).
 See also:

    http://www.nlm.nih.gov/mesh/
    http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
    http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
    http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

 OLDMEDLINE is covered back to 1950.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
```

MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate

```
L48        22108 SEA FILE=MEDLINE ABB=ON  ADJUVANTS, IMMUNOLOGIC/CT
L51         3885 SEA FILE=MEDLINE ABB=ON  BETA-GLUCANS/CT OR GLUCANS/CT
L53         1137 SEA FILE=MEDLINE ABB=ON  L51(L)(IM OR ME)/CT
L54           46 SEA FILE=MEDLINE ABB=ON  L53 AND L48
L55       176666 SEA FILE=MEDLINE ABB=ON  T-LYMPHOCYTES+NT/CT
L56            1 SEA FILE=MEDLINE ABB=ON  L54 AND L55
```

IM = immunology
ME = metabolism

```
L48        22108 SEA FILE=MEDLINE ABB=ON  ADJUVANTS, IMMUNOLOGIC/CT
L51         3885 SEA FILE=MEDLINE ABB=ON  BETA-GLUCANS/CT OR GLUCANS/CT
L53         1137 SEA FILE=MEDLINE ABB=ON  L51(L)(IM OR ME)/CT
L57           16 SEA FILE=MEDLINE ABB=ON  L53/MAJ AND L48/MAJ
```

```
L48        22108 SEA FILE=MEDLINE ABB=ON  ADJUVANTS, IMMUNOLOGIC/CT
L51         3885 SEA FILE=MEDLINE ABB=ON  BETA-GLUCANS/CT OR GLUCANS/CT
L53         1137 SEA FILE=MEDLINE ABB=ON  L51(L)(IM OR ME)/CT
L54           46 SEA FILE=MEDLINE ABB=ON  L53 AND L48
L58        79475 SEA FILE=MEDLINE ABB=ON  LYMPHOCYTE ACTIVATION/CT
L65            4 SEA FILE=MEDLINE ABB=ON  L54 AND L58 AND L48

=> s (l56 or l57 or l65) not l178

L183          18 (L56 OR L57 OR L65) NOT L178
```

previously printed

```
=> fil embase; d que l86; d que l93

FILE 'EMBASE' ENTERED AT 13:09:18 ON 03 FEB 2006
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 FILE COVERS 1974 TO 2 Feb 2006 (20060202/ED)

 EMBASE has been reloaded. Enter HELP RLOAD for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

L70          886 SEA FILE=EMBASE ABB=ON  BETA GLUCAN/CT
L72          470 SEA FILE=EMBASE ABB=ON  BETA 1,3 GLUCAN/CT
L73           38 SEA FILE=EMBASE ABB=ON  BETA 1,6 GLUCAN/CT
L76        13726 SEA FILE=EMBASE ABB=ON  IMMUNOPOTENTIATION+NT/CT
L77         6094 SEA FILE=EMBASE ABB=ON  IMMUNOMODULATING AGENT/CT
L78        25681 SEA FILE=EMBASE ABB=ON  IMMUNOMODULATION/CT
L81          214 SEA FILE=EMBASE ABB=ON  (L70 OR (L72 OR L73))(L)(DT OR PD OR
                 PK OR AD OR DO)/CT
L83       165379 SEA FILE=EMBASE ABB=ON  T LYMPHOCYTE+NT/CT
L86            8 SEA FILE=EMBASE ABB=ON  L81 AND (L76 OR L77 OR L78) AND L83
```

DT - drug therapy
PD - pharmacology
PK - pharmacokinetics
AD - administration
DO - dosage

```
L70          886 SEA FILE=EMBASE ABB=ON  BETA GLUCAN/CT
```

Searched by Barb O'Bryen, STIC 2-2518

```
L72          470 SEA FILE=EMBASE ABB=ON  BETA 1,3 GLUCAN/CT
L73           38 SEA FILE=EMBASE ABB=ON  BETA 1,6 GLUCAN/CT
L91          741 SEA FILE=EMBASE ABB=ON  L70/MAJ OR L72/MAJ OR L73/MAJ
L92        11887 SEA FILE=EMBASE ABB=ON  LYMPHOCYTE ACTIVATION/CT
L93            4 SEA FILE=EMBASE ABB=ON  L91 AND L92


=> s (l86 or l93) not l75

L184        12 (L86 OR L93) NOT L75
```

previously printed

```
=> fil drugu; d que l111; d que l104

FILE 'DRUGU' ENTERED AT 13:09:20 ON 03 FEB 2006
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FILE LAST UPDATED: 31 JAN 2006        <20060131/UP>
>>>  DERWENT DRUG FILE (SUBSCRIBER)  <<<

>>>  FILE COVERS 1983 TO DATE  <<<
>>>  THESAURUS AVAILABLE IN /CT  <<<



L8             1 SEA FILE=REGISTRY ABB=ON  37361-00-5
L9             2 SEA FILE=REGISTRY ABB=ON  "B-D-GLUCAN, (1.FWDARW.3)-"/CN
L98           29 SEA FILE=DRUGU ABB=ON  (L8 OR L9)
L99           80 SEA FILE=DRUGU ABB=ON  GLUCAN-BETA-1,3/CT OR GLUCAN-BETA-1,3-D/
                 CT
L100           2 SEA FILE=DRUGU ABB=ON  GLUCAN-BETA-1,6-D/CT
L101           4 SEA FILE=DRUGU ABB=ON  GLUCAN-BETA/CT
L105       35519 SEA FILE=DRUGU ABB=ON  IMMUNOSTIMULANT#/CT
L106       10349 SEA FILE=DRUGU ABB=ON  IMMUNE-RESPONSE/CT
L107       32092 SEA FILE=DRUGU ABB=ON  LYMPHOCYTE/CT
L108       61981 SEA FILE=DRUGU ABB=ON  BIOLOGICAL RESPONSE MODIFIERS/CC
L111           8 SEA FILE=DRUGU ABB=ON  (L98 OR L99 OR L100 OR L101) AND L107
                 AND ((L105 OR L106) OR L108)



L8             1 SEA FILE=REGISTRY ABB=ON  37361-00-5
L9             2 SEA FILE=REGISTRY ABB=ON  "B-D-GLUCAN, (1.FWDARW.3)-"/CN
L98           29 SEA FILE=DRUGU ABB=ON  (L8 OR L9)
L99           80 SEA FILE=DRUGU ABB=ON  GLUCAN-BETA-1,3/CT OR GLUCAN-BETA-1,3-D/
                 CT
L100           2 SEA FILE=DRUGU ABB=ON  GLUCAN-BETA-1,6-D/CT
L101           4 SEA FILE=DRUGU ABB=ON  GLUCAN-BETA/CT
L102       17383 SEA FILE=DRUGU ABB=ON  THYMOCYTE/CT
L104           4 SEA FILE=DRUGU ABB=ON  (L98 OR L99 OR L100 OR L101) AND L102


=> s (l111 or l104) not l97

L185        10 (L111 OR L104) NOT L97
```

previously printed

```
=> fil wpids; d que l130; d que l134

FILE 'WPIDS' ENTERED AT 13:09:22 ON 03 FEB 2006
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```

```
FILE LAST UPDATED:          1 FEB 2006      <20060201/UP>
MOST RECENT DERWENT UPDATE:     200608        <200608/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
    PLEASE VISIT:
 http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<


>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
http://scientific.thomson.com/support/patents/coverage/latestupdates/

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    GUIDES, PLEASE VISIT:
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>>> FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT
    DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX
    FIRST VIEW - FILE WPIFV.
    FOR FURTHER DETAILS:
http://scientific.thomson.com/support/products/dwpifv/

>>> THE CPI AND EPI MANUAL CODES WILL BE REVISED FROM UPDATE 200601.
    PLEASE CHECK:
http://scientific.thomson.com/support/patents/dwpiref/reftools/classification

>>> PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE
http://www.stn-international.de/stndatabases/details/ipc_reform.html  and
http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf <<<


L116       2241 SEA FILE=WPIDS ABB=ON  GLUCAN#
L117       9860 SEA FILE=WPIDS ABB=ON  IMMUNE RESPONSE
L118      13730 SEA FILE=WPIDS ABB=ON  ADJUVANT#
L119       5852 SEA FILE=WPIDS ABB=ON  IMMUNOSTIMULA?
L120        436 SEA FILE=WPIDS ABB=ON  IMMUNOPOTENTIAT?
L121        483 SEA FILE=WPIDS ABB=ON  COSTIMULA? OR CO STIMULA?
L122       2049 SEA FILE=WPIDS ABB=ON  IMMUN#(W)(STIMULA? OR POTENTIAT? OR
                MODULAT?)
L123       8323 SEA FILE=WPIDS ABB=ON  IMMUNOMODULAT?
L124       1232 SEA FILE=WPIDS ABB=ON  B7
L125      11598 SEA FILE=WPIDS ABB=ON  T(W)(CELL# OR LYMPHOCYTE#)
L127         19 SEA FILE=WPIDS ABB=ON  L116 AND L125 AND (L117 OR L118 OR L119
                OR L120 OR L121 OR L122 OR L123 OR L124)
L128      35231 SEA FILE=WPIDS ABB=ON  GLUCOSE
L129       4807 SEA FILE=WPIDS ABB=ON  CHITIN OR ACETYLGLUCOSAMINE OR ACETYL(W)
                GLUCOSAMINE
L130          2 SEA FILE=WPIDS ABB=ON  L127 AND L128 AND L129



L116       2241 SEA FILE=WPIDS ABB=ON  GLUCAN#
L117       9860 SEA FILE=WPIDS ABB=ON  IMMUNE RESPONSE
L118      13730 SEA FILE=WPIDS ABB=ON  ADJUVANT#
L119       5852 SEA FILE=WPIDS ABB=ON  IMMUNOSTIMULA?
L120        436 SEA FILE=WPIDS ABB=ON  IMMUNOPOTENTIAT?
L121        483 SEA FILE=WPIDS ABB=ON  COSTIMULA? OR CO STIMULA?
L122       2049 SEA FILE=WPIDS ABB=ON  IMMUN#(W)(STIMULA? OR POTENTIAT? OR
                MODULAT?)
L123       8323 SEA FILE=WPIDS ABB=ON  IMMUNOMODULAT?
```

```
L124       1232 SEA FILE=WPIDS ABB=ON  B7
L125      11598 SEA FILE=WPIDS ABB=ON  T(W)(CELL# OR LYMPHOCYTE#)
L127         19 SEA FILE=WPIDS ABB=ON  L116 AND L125 AND (L117 OR L118 OR L119
               OR L120 OR L121 OR L122 OR L123 OR L124)
L128      35231 SEA FILE=WPIDS ABB=ON  GLUCOSE
L129       4807 SEA FILE=WPIDS ABB=ON  CHITIN OR ACETYLGLUCOSAMINE OR ACETYL(W)
               GLUCOSAMINE
L132       1272 SEA FILE=WPIDS ABB=ON  BETA(3A)L116
L134          4 SEA FILE=WPIDS ABB=ON  L127 AND L132 AND (L128 OR L129)


=> s (l130 or l134) not l179

L186          4 (L130 OR L134) NOT L179

=> fil biosis; d que l160; d que l163; d que l167; d que l168; d que l170; d que
l171; d que l172

FILE 'BIOSIS' ENTERED AT 13:09:25 ON 03 FEB 2006
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FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 1 February 2006 (20060201/ED)



L8            1 SEA FILE=REGISTRY ABB=ON  37361-00-5
L9            2 SEA FILE=REGISTRY ABB=ON  "B-D-GLUCAN, (1.FWDARW.3)-"/CN
L141        970 SEA FILE=BIOSIS ABB=ON  (L8 OR L9)
L142       5632 SEA FILE=BIOSIS ABB=ON  GLUCAN#(3A)BETA
L144     271754 SEA FILE=BIOSIS ABB=ON  T(W)(CELL# OR LYMPHOCYTE#)
L145      86880 SEA FILE=BIOSIS ABB=ON  IMMUNE RESPONSE
L146      45803 SEA FILE=BIOSIS ABB=ON  ADJUVANT#
L147      18096 SEA FILE=BIOSIS ABB=ON  IMMUNOSTIMULA?
L148       1248 SEA FILE=BIOSIS ABB=ON  IMMUNOPOTENTIAT?
L149      10288 SEA FILE=BIOSIS ABB=ON  COSTIMULA? OR CO STIMULA?
L150      18802 SEA FILE=BIOSIS ABB=ON  IMMUNOMODULAT?
L154       4951 SEA FILE=BIOSIS ABB=ON  IMMUN#(W)(STIMULA? OR POTENTIAT? OR
               MODULAT?)
L155       7672 SEA FILE=BIOSIS ABB=ON  B7#
L156         45 SEA FILE=BIOSIS ABB=ON  (L141 OR L142) AND L144 AND ((L145 OR
               L146 OR L147 OR L148 OR L149 OR L150) OR (L154 OR L155))
L157     285728 SEA FILE=BIOSIS ABB=ON  GLUCOSE
L158      15535 SEA FILE=BIOSIS ABB=ON  CHITIN OR  ACETYLGLUCOSAMINE OR
               ACETYL(W)GLUCOSAMINE
L160          2 SEA FILE=BIOSIS ABB=ON  L156 AND (L157 OR L158)



L8            1 SEA FILE=REGISTRY ABB=ON  37361-00-5
L9            2 SEA FILE=REGISTRY ABB=ON  "B-D-GLUCAN, (1.FWDARW.3)-"/CN
L141        970 SEA FILE=BIOSIS ABB=ON  (L8 OR L9)
L142       5632 SEA FILE=BIOSIS ABB=ON  GLUCAN#(3A)BETA
L144     271754 SEA FILE=BIOSIS ABB=ON  T(W)(CELL# OR LYMPHOCYTE#)
L155       7672 SEA FILE=BIOSIS ABB=ON  B7#
L163          2 SEA FILE=BIOSIS ABB=ON  (L141 OR L142) AND L144 AND L155
```

previously printed

```
L8            1 SEA FILE=REGISTRY ABB=ON  37361-00-5
L9            2 SEA FILE=REGISTRY ABB=ON  "B-D-GLUCAN, (1.FWDARW.3)-"/CN
L141        970 SEA FILE=BIOSIS ABB=ON  (L8 OR L9)
L142       5632 SEA FILE=BIOSIS ABB=ON  GLUCAN#(3A)BETA
L144     271754 SEA FILE=BIOSIS ABB=ON  T(W)(CELL# OR LYMPHOCYTE#)
L148       1248 SEA FILE=BIOSIS ABB=ON  IMMUNOPOTENTIAT?
L167          3 SEA FILE=BIOSIS ABB=ON  (L141 OR L142) AND L144 AND L148


L8            1 SEA FILE=REGISTRY ABB=ON  37361-00-5
L9            2 SEA FILE=REGISTRY ABB=ON  "B-D-GLUCAN, (1.FWDARW.3)-"/CN
L141        970 SEA FILE=BIOSIS ABB=ON  (L8 OR L9)
L142       5632 SEA FILE=BIOSIS ABB=ON  GLUCAN#(3A)BETA
L144     271754 SEA FILE=BIOSIS ABB=ON  T(W)(CELL# OR LYMPHOCYTE#)
L149      10288 SEA FILE=BIOSIS ABB=ON  COSTIMULA? OR CO STIMULA?
L168          2 SEA FILE=BIOSIS ABB=ON  (L141 OR L142) AND L144 AND L149


L8            1 SEA FILE=REGISTRY ABB=ON  37361-00-5
L9            2 SEA FILE=REGISTRY ABB=ON  "B-D-GLUCAN, (1.FWDARW.3)-"/CN
L141        970 SEA FILE=BIOSIS ABB=ON  (L8 OR L9)
L142       5632 SEA FILE=BIOSIS ABB=ON  GLUCAN#(3A)BETA
L144     271754 SEA FILE=BIOSIS ABB=ON  T(W)(CELL# OR LYMPHOCYTE#)
L154       4951 SEA FILE=BIOSIS ABB=ON  IMMUN#(W)(STIMULA? OR POTENTIAT? OR
                MODULAT?)
L170          2 SEA FILE=BIOSIS ABB=ON  (L141 OR L142) AND L144 AND L154


L8            1 SEA FILE=REGISTRY ABB=ON  37361-00-5
L9            2 SEA FILE=REGISTRY ABB=ON  "B-D-GLUCAN, (1.FWDARW.3)-"/CN
L141        970 SEA FILE=BIOSIS ABB=ON  (L8 OR L9)
L142       5632 SEA FILE=BIOSIS ABB=ON  GLUCAN#(3A)BETA
L144     271754 SEA FILE=BIOSIS ABB=ON  T(W)(CELL# OR LYMPHOCYTE#)
L145      86880 SEA FILE=BIOSIS ABB=ON  IMMUNE RESPONSE
L147      18096 SEA FILE=BIOSIS ABB=ON  IMMUNOSTIMULA?
L150      18802 SEA FILE=BIOSIS ABB=ON  IMMUNOMODULAT?
L171          5 SEA FILE=BIOSIS ABB=ON  (L141 OR L142) AND L144 AND L145 AND
                (L147 OR L150)


L8            1 SEA FILE=REGISTRY ABB=ON  37361-00-5
L9            2 SEA FILE=REGISTRY ABB=ON  "B-D-GLUCAN, (1.FWDARW.3)-"/CN
L141        970 SEA FILE=BIOSIS ABB=ON  (L8 OR L9)
L142       5632 SEA FILE=BIOSIS ABB=ON  GLUCAN#(3A)BETA
L144     271754 SEA FILE=BIOSIS ABB=ON  T(W)(CELL# OR LYMPHOCYTE#)
L147      18096 SEA FILE=BIOSIS ABB=ON  IMMUNOSTIMULA?
L150      18802 SEA FILE=BIOSIS ABB=ON  IMMUNOMODULAT?
L172          2 SEA FILE=BIOSIS ABB=ON  (L141 OR L142) AND L144 AND (L147 AND
                L150)

=> s (l160 or l163 or l167 or l168 or l170-l172) not l180

L187         13 (L160 OR L163 OR L167 OR L168 OR (L170 OR L171 OR L172)) NOT
```

L180 previously printed

```
=> => dup rem l183,l185,l182,l187,l184,l186
FILE 'MEDLINE' ENTERED AT 13:09:58 ON 03 FEB 2006

FILE 'DRUGU' ENTERED AT 13:09:58 ON 03 FEB 2006
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PROCESSING COMPLETED FOR L183
PROCESSING COMPLETED FOR L185
PROCESSING COMPLETED FOR L182
PROCESSING COMPLETED FOR L187
PROCESSING COMPLETED FOR L184
PROCESSING COMPLETED FOR L186
L188          63 DUP REM L183 L185 L182 L187 L184 L186 (6 DUPLICATES REMOVED)
                 ANSWERS '1-18' FROM FILE MEDLINE
                 ANSWERS '19-28' FROM FILE DRUGU
                 ANSWERS '29-40' FROM FILE CAPLUS
                 ANSWERS '41-52' FROM FILE BIOSIS
                 ANSWERS '53-60' FROM FILE EMBASE
                 ANSWERS '61-63' FROM FILE WPIDS

=> d iall 1-28; d ibib ed abs hitind 29-40; d iall 41-63; fil hom

L188 ANSWER 1 OF 63      MEDLINE on STN
ACCESSION NUMBER:    1998371043      MEDLINE
DOCUMENT NUMBER:     PubMed ID: 9705343
TITLE:               A novel carbohydrate-glycosphingolipid interaction between
                     a beta-(1-3)-glucan immunomodulator, PGG-glucan, and
                     lactosylceramide of human leukocytes.
AUTHOR:              Zimmerman J W; Lindermuth J; Fish P A; Palace G P;
                     Stevenson T T; DeMong D E
CORPORATE SOURCE:    Alpha-Beta Technology, Inc., Worcester, Massachusetts
                     01605, USA.. jzimme@abti.com
SOURCE:              Journal of biological chemistry, (1998 Aug 21) 273 (34)
                     22014-20.
                     Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY:        United States
DOCUMENT TYPE:       Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:            English
FILE SEGMENT:        Priority Journals
ENTRY MONTH:         199809
ENTRY DATE:          Entered STN: 19980925
                     Last Updated on STN: 19980925
                     Entered Medline: 19980917
ABSTRACT:
The immunomodulator Betafectin(R) PGG-glucan is a homopolymer of glucose
```

derived from yeast cell walls which has been demonstrated to enhance leukocyte anti-infective activity in vitro and in vivo, without the induction of proinflammatory cytokines. We report here the purification of a PGG-glucan-binding element from human leukocytes and its identification as lactosylceramide, a major glycosphingolipid of neutrophils, which includes the CDw17 epitope. The binding of radiolabeled PGG-glucan to purified lactosylceramide was saturable, specific, and time- and temperature-dependent. Lactosylceramides from human leukocytes were fractionated by high performance liquid chromatography in order to analyze the effect of ceramide structure on binding. A variety of fatty acid chain lengths with varying degrees of unsaturation were found to support binding to radiolabeled PGG-glucan. However, DL-lactosylceramides containing dihydrosphingosine did not bind. Radiolabeled PGG-glucan bound several other neutral glycosphingolipids with a terminal galactose, including galactosylceramide, globotriaosylceramide, and gangliotetraosylceramide. The binding of radiolabeled PGG-glucan to lactosylceramide was not inhibited by glycogen, dextran, mannan, pustulan, laminarin, or a low molecular weight beta-(1-3)-glucan, but was inhibited by high molecular weight beta-(1-3)-glucans and by a monoclonal antibody to lactosylceramide. Although this glycosphingolipid has been shown in numerous reports to bind various microorganisms, this represents the first report of lactosylceramide binding to a macromolecular carbohydrate.

CONTROLLED TERM: ***Adjuvants, Immunologic: ME, metabolism**
Antigens, CD: ME, metabolism
Binding Sites
Cell Differentiation
***Glucans: ME, metabolism**
*Glycosphingolipids: ME, metabolism
Humans
*Lactosylceramides: ME, metabolism
*Leukocytes: ME, metabolism
Temperature
Time Factors
*beta-Glucans

CAS REGISTRY NO.: 4682-48-8 (CDw17 antigen)

CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Antigens, CD); 0 (Glucans); 0 (Glycosphingolipids); 0 (Lactosylceramides); 0 (beta-Glucans); 0 (poly-1-6-glucopyranosyl-1-3-glucopyranose glucan)

L188 ANSWER 2 OF 63 MEDLINE on STN
ACCESSION NUMBER: 1999038741 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9821300
TITLE: Inhibition of lymphoproliferative response and its restoration with a glucan immunomodulator in mice with experimental larval toxocarosis.
AUTHOR: Boroskova Z; Reiterova K; Dubinsky P; Tomasovicova O; Machnicka B
CORPORATE SOURCE: Parasitological Institute, Slovak, Kosice, Slovakia.
SOURCE: Folia microbiologica, (1998) 43 (5) 475-6.
Journal code: 0376757. ISSN: 0015-5632.
PUB. COUNTRY: Czech Republic
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199812
ENTRY DATE: Entered STN: 19990115
Last Updated on STN: 19990115
Entered Medline: 19981211

ABSTRACT:
A high infective dose of Taxocara canis eggs (2,500 eggs per mouse) induced a

partial immunosuppression in mice, manifested by inhibition of the proliferative response of splenic T and B cells to polyclonal activators. A glucan immunomodulator given to infected animals at the beginning of the experiment showed a marked stimulative and restorative effect on the parasite-suppressed lymphoproliferative response. The ability of T. canis to migrate in the host was reduced in glucan-treated animals by 27%.

CONTROLLED TERM: ***Adjuvants, Immunologic**
Animals
B-Lymphocytes: IM, immunology
Glucans: IM, immunology
*Glucans: PD, pharmacology
*Immune Tolerance
Larva: IM, immunology
***Lymphocyte Activation**
Mice
Mice, Inbred C57BL
Mitogens: PD, pharmacology
Phytohemagglutinins: PD, pharmacology
Research Support, Non-U.S. Gov't
T-Lymphocytes: IM, immunology
*Toxocara canis: IM, immunology
Toxocara canis: PH, physiology
*Toxocariasis: IM, immunology
Toxocariasis: PS, parasitology
*beta-Glucans

CAS REGISTRY NO.: 9051-97-2 (beta-1,3-glucan)
CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Glucans); 0 (Mitogens); 0 (Phytohemagglutinins); 0 (beta-Glucans)

L188 ANSWER 3 OF 63 MEDLINE on STN
ACCESSION NUMBER: 1998351366 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9688080
TITLE: Immunomodulatory effects of oat beta-glucan administered intragastrically or parenterally on mice infected with Eimeria vermiformis.
AUTHOR: Yun C H; Estrada A; Van Kessel A; Gajadhar A; Redmond M; Laarveld B
CORPORATE SOURCE: Animal Biotechnology Centre, Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, Canada.
SOURCE: Microbiology and immunology, (1998) 42 (6) 457-65.
Journal code: 7703966. ISSN: 0385-5600.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199810
ENTRY DATE: Entered STN: 19981021
Last Updated on STN: 19981021
Entered Medline: 19981015

ABSTRACT:
The immunostimulatory effect of intragastrically or parenterally administered beta-(1-->3; 1-->4) glucan, extracted from oats (ObetaG), on disease resistance to Eimeria vermiformis was studied in C57BL/6 mice. Multiple administrations of ObetaG by intragastric or subcutaneous routes reduced fecal oocyst shedding compared to the non-treated control group. The administration of ObetaG by subcutaneous route resulted in higher levels of total serum immunoglobulins and antigen (sporozoite and merozoite)-specific immunoglobulins as compared with the non-treated group. To evaluate the effect of a single subcutaneous dose, groups of mice were treated with ObetaG 2 days before E. vermiformis infection,

at the time of infection and at 2 or 6 days after infection. From day 11 post-infection the oocyst discharge was significantly diminished (P<0.05-0.01) in the ObetaG-treated groups, except in those treated 6 days after infection, as compared to the non-treated control group. The proliferative responses to E. vermiformis sporozoite antigen of lymphocytes isolated from the spleen were significantly increased (P<0.05) when ObetaG was administered 2 days before or at the time of E. vermiformis infection. Lymphocyte proliferative responses to merozoite antigen were not influenced by treatment. In conclusion, ObetaG appeared to up-regulate immune mechanisms and provide enhanced resistance against eimerian coccidiosis in mice.

CONTROLLED TERM: Check Tags: Female
***Adjuvants, Immunologic**
Animals
Antibodies, Protozoan: BL, blood
Antigens, Protozoan: IM, immunology
Avena sativa
*Coccidiosis: IM, immunology
Cytokines: BI, biosynthesis
*Eimeria
Eimeria: GD, growth & development
Eimeria: IM, immunology
*Glucans: AD, administration & dosage
***Glucans: IM, immunology**
Immunoglobulins: BL, blood
Lymphocyte Activation
Mice
Mice, Inbred C57BL
Research Support, Non-U.S. Gov't
Time Factors
*beta-Glucans

CAS REGISTRY NO.: 55965-23-6 (beta-glucan, (1-3)(1-4)-)

CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Antibodies, Protozoan); 0 (Antigens, Protozoan); 0 (Cytokines); 0 (Glucans); 0 (Immunoglobulins); 0 (beta-Glucans)

L188 ANSWER 4 OF 63 MEDLINE on STN
ACCESSION NUMBER: 1998151149 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9492185
TITLE: Immunomodulatory activities of oat beta-glucan in vitro and in vivo.
AUTHOR: Estrada A; Yun C H; Van Kessel A; Li B; Hauta S; Laarveld B
CORPORATE SOURCE: Animal Biotechnology Centre, Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, Canada.. estrada@SASK.USASK.CA
SOURCE: Microbiology and immunology, (1997) 41 (12) 991-8.
Journal code: 7703966. ISSN: 0385-5600.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199804
ENTRY DATE: Entered STN: 19980410
Last Updated on STN: 19980410
Entered Medline: 19980402

ABSTRACT:
Previous studies have shown that beta-glucans extracted from yeast or fungi potentiate immune responses. In the present study, the immunomodulatory activities of beta-(1-->3,1-->4)-glucan, derived from oats, were investigated. The ability of oat beta-glucan (ObetaG) to stimulate IL-1 and TNF-alpha release from murine peritoneal macrophages and the murine macrophage cell line P338D1,

was assessed. In vitro stimulation of macrophages with ObetaG resulted in the production of IL-1 in a dose and time-dependent manner, whereas only small amounts of TNF-alpha could be detected in the culture supernatants. ObetaG also induced the production of IL-2, IFN-gamma and IL-4 secretion in a dose-dependent manner in cultured spleen cells. The intraperitoneal administration of ObetaG in mice resulted in the accumulation of leucocytes, predominantly macrophages, in the peritoneal cavity. Furthermore, ObetaG was tested for its ability to enhance non-specific resistance to a bacterial challenge in mice. Survival of mice challenged with Staphylococcus aureus was enhanced by a single intraperitoneal administration of 500 microg of ObetaG 3 days prior to bacterial challenge. In conclusion, these studies demonstrated that ObetaG possesses immunomodulatory activities capable of stimulating immune functions both in vitro and in vivo.

CONTROLLED TERM: ***Adjuvants, Immunologic: PD, pharmacology**
Animals
Avena sativa
Cell Line
Cells, Cultured
*Cytokines: ME, metabolism
***Glucans: IM, immunology**
Interferon Type II: ME, metabolism
Interleukins: ME, metabolism
*Macrophages, Peritoneal: IM, immunology
Mice
Mice, Inbred BALB C
Mice, Inbred Strains
Peritoneal Cavity: CY, cytology
Research Support, Non-U.S. Gov't
Spleen: IM, immunology
Staphylococcal Infections: IM, immunology
Tumor Necrosis Factor-alpha: ME, metabolism
Zymosan: PD, pharmacology
*beta-Glucans

CAS REGISTRY NO.: 55965-23-6 (beta-glucan, (1-3)(1-4)-); 82115-62-6 (Interferon Type II); 9010-72-4 (Zymosan)

CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Cytokines); 0 (Glucans); 0 (Interleukins); 0 (Tumor Necrosis Factor-alpha); 0 (beta-Glucans)

L188 ANSWER 5 OF 63 MEDLINE on STN
ACCESSION NUMBER: 96229136 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8644497
TITLE: Glucans as immunological adjuvants.
AUTHOR: Mohagheghpour N; Dawson M; Hobbs P; Judd A; Winant R; Dousman L; Waldeck N; Hokama L; Tuse D; Kos F; +
CORPORATE SOURCE: Life Sciences Division, SRI International, Menlo Park, California 94025-3493, USA.
CONTRACT NUMBER: AI30939 (NIAID)
SOURCE: Advances in experimental medicine and biology, (1995) 383 13-22.
Journal code: 0121103. ISSN: 0065-2598.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199607
ENTRY DATE: Entered STN: 19960726
Last Updated on STN: 19960726
Entered Medline: 19960716
CONTROLLED TERM: Check Tags: Female

***Adjuvants, Immunologic**
Animals
Antibody Formation: DE, drug effects
Glucans: CH, chemistry
***Glucans: IM, immunology**
*Glycoproteins: CH, chemistry
Immunoconjugates: IM, immunology
Macrophages: IM, immunology
Mice
Mice, Inbred BALB C
Molecular Structure
Rabbits
Research Support, U.S. Gov't, P.H.S.
*Viral Proteins: IM, immunology
*beta-Glucans
CAS REGISTRY NO.: 9051-97-2 (beta-1,3-glucan)
CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Glucans); 0 (Glycoproteins); 0 (Immunoconjugates); 0 (Viral Proteins); 0 (beta-Glucans)

L188 ANSWER 6 OF 63 MEDLINE on STN
ACCESSION NUMBER: 94176560 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8130277
TITLE: A novel immunomodulator soluble aminated beta-1,3-D-glucan: binding characteristics to mouse peritoneal macrophages.
AUTHOR: Konopski Z; Smedsrod B; Seljelid R; Eskeland T
CORPORATE SOURCE: Department of Experimental Pathology and Anatomy, University of Tromso, Norway.
SOURCE: Biochimica et biophysica acta, (1994 Mar 10) 1221 (1) 61-5. Journal code: 0217513. ISSN: 0006-3002.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199404
ENTRY DATE: Entered STN: 19940428
Last Updated on STN: 19970203
Entered Medline: 19940418

ABSTRACT:
We have previously reported that soluble aminated beta-1,3-D-glucan (AG), a potent immunomodulator, specifically inhibited binding and internalization of AG-coated microbeads (GDM) in mouse peritoneal macrophages. The present study was undertaken to determine parameters of AG binding to macrophages. For this purpose, AG was conjugated with tyraminyl cellobiose (TC), which can be radioiodinated. With this method the immunomodulator was labelled with a very high specific radioactivity, allowing sensitive measurements of binding. Maximal binding capacity was 0.33 micrograms [125I]TC-AG/10(6) cells. Binding was inhibited by TC-AG and AG, but not by mannose and mannan, showing that the receptor different from the mannose receptor was involved. Binding was reversible, with an initial association rate of 120 cpm/min, and a much faster initial dissociation rate of 680 cpm/min. Bound [125I]TC-AG was internalized. These findings suggest that both AG and GDM are bound and internalized via the same beta-glucan receptor in mouse peritoneal macrophages.
CONTROLLED TERM: Check Tags: Female
***Adjuvants, Immunologic: ME, metabolism**
Animals
Biological Transport
Cells, Cultured
***Glucans: ME, metabolism**
Iodine Radioisotopes
Kinetics

*Macrophages, Peritoneal: ME, metabolism
Mice
Mice, Inbred BALB C
Mice, Inbred C57BL
*beta-Glucans
CAS REGISTRY NO.: 9051-97-2 (beta-1,3-glucan)
CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Glucans); 0 (Iodine Radioisotopes); 0 (beta-Glucans)

L188 ANSWER 7 OF 63 MEDLINE on STN
ACCESSION NUMBER: 93364375 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8358393
TITLE: Immunopharmacological characterization of a highly branched fungal (1-->3)-beta-D-glucan, OL-2, isolated from Omphalia lapidescens.
AUTHOR: Ohno N; Saito K; Nemoto J; Kaneko S; Adachi Y; Nishijima M; Miyazaki T; Yadomae T
CORPORATE SOURCE: Tokyo College of Pharmacy, Japan.
SOURCE: Biological & pharmaceutical bulletin, (1993 Apr) 16 (4) 414-9.
Journal code: 9311984. ISSN: 0918-6158.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199309
ENTRY DATE: Entered STN: 19931015
Last Updated on STN: 19931015
Entered Medline: 19930927

ABSTRACT:
The immunopharmacological activities of a fungal (1-->3)-beta-D-glucan, OL-2, isolated from "Leiwan" Omphalia lapidescens were examined. Intraperitoneal (i.p.) administration of OL-2 to ICR mice induced a significant number of peritoneal exudate cells (PEC) and white blood cells over the period of a few days. Spleen cell numbers were also increased by i.p. administration of OL-2 at about a week. These changes reverted to the normal level within a month. Responses of spleen cells and bone marrow cells (BM) to colony stimulating factors (CSF) were augmented by OL-2 administration assessed by cell proliferation assay. Sera from OL-2 administered mice contained an increased concentration of colony stimulating activity. Gene expressions of interleukin-1 beta, interleukin-6, and tumor necrosis factor alpha in the spleen were also increased. These results suggested the activation of hematopoietic responses, and would well relate to the incremental increase in PEC, white blood cell and spleen cell numbers. OL-2 also increased the serum concentration of fibronectin and complement component C-3. However, OL-2 did not show adjuvant activity to SRBC and antitumor activity against the solid form of Sarcoma 180 by i.p. administration. Yet, OL-2 did not interfere with the antitumor activity of SSG against the same tumor system. These facts suggested that OL-2 could enhance nonspecific host defense mechanisms by enhancing hematopoietic responses, but would not enhance or inhibit the specific immunity mediated by lymphocytes.(ABSTRACT TRUNCATED AT 250 WORDS)

CONTROLLED TERM: Check Tags: Male
Adjuvants, Immunologic: PD, pharmacology
*Agaricales: CH, chemistry
Animals
Antineoplastic Agents: CH, chemistry
Antineoplastic Agents: IM, immunology
*Antineoplastic Agents: PD, pharmacology
Base Sequence
Chemistry, Physical

Complement 3: BI, biosynthesis
Cytokines: BI, biosynthesis
Fibronectins: BL, blood
Fibronectins: IM, immunology
Glucans: CH, chemistry
Glucans: IM, immunology
*Glucans: PD, pharmacology
Leukocyte Count: DE, drug effects
Leukocytes: DE, drug effects
Leukocytes: IM, immunology
Lymphocyte Activation: DE, drug effects
Mice
Mice, Inbred AKR
Mice, Inbred ICR
Molecular Sequence Data
RNA, Messenger: BI, biosynthesis
Sarcoma 180: DT, drug therapy
Structure-Activity Relationship

CAS REGISTRY NO.: 96778-06-2 (OL 2)
CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Antineoplastic Agents); 0 (Complement 3); 0 (Cytokines); 0 (Fibronectins); 0 (Glucans); 0 (RNA, Messenger)

L188 ANSWER 8 OF 63 MEDLINE on STN
ACCESSION NUMBER: 92380573 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1823656
TITLE: The immunoadjuvant effect of soluble glucan derivatives in mice.
AUTHOR: Wagnerova J; Liskova A; Cervenakova L; Trnovec T; Ferencik M
CORPORATE SOURCE: Institute of Experimental Pharmacology, Slovak Academy of Sciences, Bratislava, Czechoslovakia.
SOURCE: Folia microbiologica, (1991) 36 (2) 198-204.
Journal code: 0376757. ISSN: 0015-5632.
PUB. COUNTRY: Czechoslovakia
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199209
ENTRY DATE: Entered STN: 19921018
Last Updated on STN: 19921018
Entered Medline: 19920928

ABSTRACT:
We examined the effect of soluble derivatives of yeast glucan on the humoral immune response of various strains of inbred mice after administration of different doses according to various schedules. Glucan was injected i.v. or s.c. in a single dose or repeatedly. The immune response was examined by determining the titres of serum hemagglutinins against sheep erythrocytes (SRBC-Ab). The immunoadjuvant effect of glucan derivatives depends on the inbred strain used, on the dose of glucan, mode and time of administration with respect to antigen injection. The results have shown that the stimulatory effect of glucan derivatives occurred already after a single injection, the optimum dose being 10-20 mg/kg. Intravenous injection was more efficient than the subcutaneous one. In some cases, a slight increase of the spleen mass was observed.

CONTROLLED TERM: Check Tags: Female
Adjuvants, Immunologic: AD, administration & dosage
***Adjuvants, Immunologic: PD, pharmacology**
Animals

Antibody Formation
Dose-Response Relationship, Immunologic
Glucans: AD, administration & dosage
***Glucans: IM, immunology**
Glucans: PD, pharmacology
*Hemagglutinins: BI, biosynthesis
Mice
Mice, Inbred A
Mice, Inbred C57BL
Mice, Inbred CBA
Sheep
Species Specificity
Yeasts: CH, chemistry
Yeasts: IM, immunology
CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Glucans); 0 (Hemagglutinins)

L188 ANSWER 9 OF 63 MEDLINE on STN
ACCESSION NUMBER: 90152775 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2695459
TITLE: Immunoprotection by beta-1,3 glucan antigen combination in Plasmodium berghei infection in mice.
AUTHOR: Maheshwari R; Siddiqui M U
SOURCE: Indian journal of medical research, (1989 Nov) 89 396-403. Journal code: 0374701. ISSN: 0971-5916.
PUB. COUNTRY: India
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199003
ENTRY DATE: Entered STN: 19900601
Last Updated on STN: 19900601
Entered Medline: 19900321

ABSTRACT:
In an attempt to protect mice against experimental infection with P. berghei, mice were immunized against soluble extract of P. berghei in combination with beta-1,3 glucan or FCA and also independently. Mice immunized against P. berghei antigen-glucan developed well defined cell mediated and humoral immune responses, while mice injected with antigen FCA or antigen alone developed only an antibody response. Antigen-glucan immunization afforded a high degree of immune protection to the host against the challenge with live parasites.

CONTROLLED TERM: Check Tags: Male
***Adjuvants, Immunologic**
Animals
Antibodies, Protozoan: BI, biosynthesis
*Antigens, Protozoan: IM, immunology
***Glucans: IM, immunology**
Immunity, Cellular
*Malaria: PC, prevention & control
Mice
*Plasmodium berghei: IM, immunology
*beta-Glucans
CAS REGISTRY NO.: 9051-97-2 (beta-1,3-glucan)
CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Antibodies, Protozoan); 0 (Antigens, Protozoan); 0 (Glucans); 0 (beta-Glucans)

L188 ANSWER 10 OF 63 MEDLINE on STN
ACCESSION NUMBER: 89291140 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2737802
TITLE: Protective effect of L. donovani antigens using glucan as an adjuvant.

AUTHOR: Obaid K A; Ahmad S; Khan H M; Mahdi A A; Khanna R
CORPORATE SOURCE: Department of Microbiology, Jawaharlal Nehru Medical College, Aligarh Muslim University, India.
SOURCE: International journal of immunopharmacology, (1989) 11 (3) 229-35.
Journal code: 7904799. ISSN: 0192-0561.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198908
ENTRY DATE: Entered STN: 19900309
Last Updated on STN: 19900309
Entered Medline: 19890803

ABSTRACT:
Golden hamsters were immunized with various antigen fractions of Leishmania donovani promastigotes. Beta 1,3-glucan was used as an adjuvant in these vaccination experiments. The results indicate that immunization of animals with the microsomal fraction (subcellular fraction III) in combination with glucan confers considerable immune protection against L. donovani infection. The immune protection was confirmed by correspondingly lower parasite burden in the livers and spleens of test animals compared to controls. Additionally, the vaccinated animals showed positive skin test responsiveness after challenge, along with increased antibody titres. Immunization of animals with whole and particulate antigen fractions was also found to afford a high degree of resistance. The other subcellular and soluble antigen fractions conferred very little protection. In these experiments, glucan was found to be a potent adjuvant when injected, intraperitoneally, with Leishmania antigens. Similar doses of parasite extracts given without an adjuvant were able to confer only very little or no protection.

CONTROLLED TERM: Check Tags: Male
***Adjuvants, Immunologic**
Animals
Antibody Formation
*Antigens, Protozoan: IM, immunology
Enzyme-Linked Immunosorbent Assay
***Glucans: IM, immunology**
Hamsters
Immunity, Cellular
*Leishmania donovani: IM, immunology
Liver: PS, parasitology
Liver: PA, pathology
Spleen: PA, pathology

CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Antigens, Protozoan); 0 (Glucans)

L188 ANSWER 11 OF 63 MEDLINE on STN
ACCESSION NUMBER: 86053262 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3079591
TITLE: Calcium-dependent and -independent tumoricidal activities of polymorphonuclear leukocytes induced by a linear beta-1,3-D-glucan and phorbol myristate acetate in mice.
AUTHOR: Morikawa K; Noguchi T; Yamazaki M; Mizuno D
SOURCE: Cancer research, (1986 Jan) 46 (1) 66-70.
Journal code: 2984705R. ISSN: 0008-5472.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198601

ENTRY DATE: Entered STN: 19900321
Last Updated on STN: 19970203
Entered Medline: 19860123

ABSTRACT:
Some antitumor immunomodulators, such as a linear beta-1,3-D-glucan from Alcaligenes faecalis var. myxogenes IFO 13140 (TAK), induce potent tumoricidal activity of polymorphonuclear leukocytes (PMNs). In the present study we investigated the role of calcium on the tumoricidal activity of PMNs induced by immunomodulators, especially TAK. The calcium chelator ethylene glycol bis(beta-aminoethyl ether)-N,N,N',N'-tetraacetic acid (EGTA) almost completely inhibited TAK-induced PMN cytotoxicity and this inhibition was restored by Ca2+ but not by Mg2+. In Ca2+- and Mg2+-free medium, PMN cytotoxicity induced by TAK was recovered by the addition of Ca2+ provided that Mg2+ was also present. By scopoletin assay, hydrogen peroxide released from PMNs by TAK was also observed in the presence of Ca2+ but not in its absence. The PMN cytotoxicities induced by the other immunomodulators, Propionibacterium acnes, Bacillus Calmette-Guerin, zymosan A, and Nocardia cell wall skeletons were also Ca2+ dependent, judging from studies with EGTA and measurement of hydrogen peroxide release in the presence and absence of Ca2+. The Ca2+ dependency of these PMN cytotoxicities suggests that Ca2+ influx is involved in the cytolytic process, but PMN cytotoxicity was not induced by simple addition of the calcium ionophore A23187. Like TAK, phorbol myristate acetate induced PMN cytotoxicity but this cytotoxicity was not Ca2+ dependent. The present report demonstrates the difference in Ca2+ dependency of these PMN cytotoxicities; i.e., extracellular calcium was required for immunomodulator-induced PMN cytotoxicity, but not for phorbol myristate acetate-induced PMN cytotoxicity. This suggests that the processes of induction of PMN cytotoxicity by the two types of activators are not identical.

CONTROLLED TERM: Check Tags: Male
***Adjuvants, Immunologic: IM, immunology**
Animals
Calcimycin: PD, pharmacology
*Calcium: PH, physiology
Cytotoxicity, Immunologic: DE, drug effects
Egtazic Acid: PD, pharmacology
***Glucans: IM, immunology**
Hydrogen Peroxide: ME, metabolism
Magnesium: PD, pharmacology
Mice
Mice, Inbred C3H
*Neutrophils: IM, immunology
*Phorbols: PD, pharmacology
Research Support, Non-U.S. Gov't
*Tetradecanoylphorbol Acetate: PD, pharmacology

CAS REGISTRY NO.: 16561-29-8 (Tetradecanoylphorbol Acetate); 52665-69-7 (Calcimycin); 67-42-5 (Egtazic Acid); 7439-95-4 (Magnesium); 7440-70-2 (Calcium); 7722-84-1 (Hydrogen Peroxide)

CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Glucans); 0 (Phorbols)

L188 ANSWER 12 OF 63 MEDLINE on STN
ACCESSION NUMBER: 85291288 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3861748
TITLE: Preparation for hapten help by glucan, muramyl dipeptide, and its L-ala-Glycerol-mycolate derivative.
AUTHOR: Leech S H; Di Luzio N R; Leclerc C
CONTRACT NUMBER: CA 24326 (NCI)
CA 25668 (NCI)
SOURCE: Journal of leukocyte biology, (1985 Aug) 38 (2) 317-25.
Journal code: 8405628. ISSN: 0741-5400.

PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198510
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19970203
Entered Medline: 19851004

ABSTRACT:
Previously, we reported that one of the factors that determines whether or not an animal will be prepared for hapten help after priming is the type of adjuvant used. The present work was undertaken, therefore, to determine which of a diverse variety of adjuvants or biological response modifiers would be effective. They included Freund's complete (CFA) and incomplete (FICA) adjuvants, particulate glucan, muramyl dipeptide (MDP), and its L-ala-glycerol-mycolate derivative. Help by the azobenzenearsonate (ABA) hapten was measured as the augmentation of the anti-bovine gamma-globulin (BGG) plaque-forming cell (PFC) response to ABA-BGG of mice that had been hapten-primed with ABA conjugated to ovalbumin (OVA). The results showed that FICA was ineffective. MDP was effective but only if administered with FICA during hapten-priming. MDP-L-ala-glycerol-mycolate was effective without any adjuvant but only within a narrow dose range. Particulate glucan was as effective as CFA in preparing mice for hapten help. As the macrophage is the primary cellular target of those biological response modifiers that were effective, we conclude that it plays an important role in the cellular interaction involved in the mediation of hapten help.

CONTROLLED TERM: *Acetylmuramyl-Alanyl-Isoglutamine: AA, analogs & derivatives
*Acetylmuramyl-Alanyl-Isoglutamine: IM, immunology
***Adjuvants, Immunologic**
Animals
Antibody Formation
***Glucans: IM, immunology**
*Haptens: IM, immunology
Lymphocytes: IM, immunology
*Macrophages: IM, immunology
Mice
Mice, Inbred BALB C
Research Support, Non-U.S. Gov't
Research Support, U.S. Gov't, P.H.S.
CAS REGISTRY NO.: 53678-77-6 (Acetylmuramyl-Alanyl-Isoglutamine)
CHEMICAL NAME: 0 (1-O-(acetylmuramyl-alanyl-isoglutaminyl-alanine)-glycerol-3-mycolate); 0 (Adjuvants, Immunologic); 0 (Glucans); 0 (Haptens)

L188 ANSWER 13 OF 63 MEDLINE on STN
ACCESSION NUMBER: 86157880 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3913389
TITLE: Glucan-induced immunity in mice against Plasmodium berghei.
AUTHOR: Kumar P; Ahmad S
SOURCE: Annals of tropical medicine and parasitology, (1985 Apr) 79 (2) 211-3.
Journal code: 2985178R. ISSN: 0003-4983.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198604
ENTRY DATE: Entered STN: 19900321
Last Updated on STN: 19900321

Entered Medline: 19860411
CONTROLLED TERM: ***Adjuvants, Immunologic**
Animals
*Antibody Formation
Antigens, Protozoan: IM, immunology
Cell Migration Inhibition
Glucans: BL, blood
***Glucans: IM, immunology**
Immunization
Mice
*Plasmodium berghei: IM, immunology
Research Support, Non-U.S. Gov't
*beta-Glucans
CAS REGISTRY NO.: 9051-97-2 (beta-1,3-glucan)
CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Antigens, Protozoan); 0 (Glucans); 0 (beta-Glucans)

L188 ANSWER 14 OF 63 MEDLINE on STN
ACCESSION NUMBER: 85053635 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6094370
TITLE: Immunization of guinea pigs against Entamoeba histolytica using glucan as an adjuvant.
AUTHOR: Sharma A; Haq A U; Siddiqui M U; Ahmad S
SOURCE: International journal of immunopharmacology, (1984) 6 (5) 483-91.
Journal code: 7904799. ISSN: 0192-0561.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198412
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19900320
Entered Medline: 19841226
ABSTRACT:
Beta 1-3 polyglucose or glucan, an extract of cell wall of Saccharomyces cerevisiae, has been successfully employed in this laboratory as an effective immunopotentiator in experimental studies on amoebiasis. An antigen extract from Entamoeba histolytica was combined with beta, 1-3 glucan for immunizing guinea pigs. In order to study the effectiveness of such vaccine preparations, several batches of guinea pigs were immunized with amoeba antigen alone, and in combination with various immunoadjuvants. Antigen inoculations were carried out via intraperitoneal route. Protective immune responses were obtained against amoeba antigen by using glucan as an adjuvant partner. The study showed that glucan can be safely used as an effective immune enhancer.
CONTROLLED TERM: ***Adjuvants, Immunologic**
Animals
*Entamoeba histolytica: IM, immunology
***Glucans: IM, immunology**
Guinea Pigs
Hemagglutination Tests: MT, methods
Research Support, Non-U.S. Gov't
Skin Tests
*Vaccines: IM, immunology
*beta-Glucans
CAS REGISTRY NO.: 9051-97-2 (beta-1,3-glucan)
CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Glucans); 0 (Vaccines); 0 (beta-Glucans)

L188 ANSWER 15 OF 63 MEDLINE on STN

ACCESSION NUMBER: 83212008 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6852909
TITLE: Immunogenicity of soluble and particulate antigens from Leishmania donovani: effect of glucan as an adjuvant.
AUTHOR: Cook J A; Holbrook T W
CONTRACT NUMBER: AI-18039 (NIAID)
SOURCE: Infection and immunity, (1983 Jun) 40 (3) 1038-43.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198307
ENTRY DATE: Entered STN: 19900319
Last Updated on STN: 19970203
Entered Medline: 19830715

ABSTRACT:
The protective efficacy of glucan as an adjuvant with killed promastigotes of Leishmania donovani was compared with that of soluble or particulate fractions of the parasite. When these vaccine preparations were injected either intravenously or subcutaneously in CF-1 mice, glucan potentiated resistance against L. donovani infections as reflected by significant reductions in hepatic amastigote counts relative to infected control mice. The leishmanial antigens alone afforded no protection. Serum direct agglutination titers to leishmanial antigens were highest in all groups given the vaccine intravenously, whereas the delayed-type hypersensitivity response to the antigen was positive only in groups immunized subcutaneously with glucan as an adjuvant. Some index of protection and immune response against visceral infection with the parasite was seen in groups vaccinated with glucan and soluble antigens. However, the protection afforded by glucan and particulate antigens of L. donovani more closely paralleled the resistance of mice treated with glucan and unfractionated killed promastigotes. Further antigenic analysis of particulate fractions of L. donovani may optimize effective immunization when used with appropriate adjuvants, e.g., glucan.

CONTROLLED TERM: Check Tags: Comparative Study; Female
***Adjuvants, Immunologic**
Agglutinins: AN, analysis
Animals
***Glucans: IM, immunology**
Hypersensitivity, Delayed
*Immunization
Injections, Intravenous
Injections, Subcutaneous
Leishmania: GD, growth & development
*Leishmania: IM, immunology
*Leishmaniasis, Visceral: IM, immunology
Leishmaniasis, Visceral: PS, parasitology
Liver: PS, parasitology
Mice
Research Support, U.S. Gov't, P.H.S.
Solubility
CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Agglutinins); 0 (Glucans)

L188 ANSWER 16 OF 63 MEDLINE on STN
ACCESSION NUMBER: 82166374 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7068224
TITLE: Glucan as an adjuvant for a murine Babesia microti immunization trial.
AUTHOR: Benach J L; Habicht G S; Holbrook T W; Cook J A
CONTRACT NUMBER: AG00801 (NIA)

SOURCE: Infection and immunity, (1982 Mar) 35 (3) 947-51.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198206
ENTRY DATE: Entered STN: 19900317
Last Updated on STN: 19970203
Entered Medline: 19820614

ABSTRACT:
A vaccination protocol against murine Babesia microti infection, using glucan, a beta-1,3-glucopyranose derivative of yeast cell walls, and glutaraldehyde-fixed infected erythrocytes was evaluated. BALB/c mice were immunized intravenously four times at 2-day intervals with 2 X 10(8) fixed infected erythrocytes with and without glucan (0.45 mg). The mice were challenged 2 weeks after the last immunization with 10(8) viable infected erythrocytes. Peak parasitemia was significantly reduced (8.9 +/- 1.0%; P less than 0.001) in glucan-immunized mice as compared with nonimmunized controls (41.2 +/- 1.4%), glucan-treated controls (31.7 +/- 2.5%; P less than 0.05), or mice which received fixed infected erythrocytes without glucan (21.0 +/- 1.2%; P less than 0.01). Humoral and cellular immunity to B. microti was evaluated before challenge by measuring antibody titers and splenocyte blastogenic responses to B. microti antigens. The in vitro cellular response was inversely correlated with mean peak parasitemia (P less than 0.05). These observations demonstrate that glucan is an effective adjuvant in enhancing immunity to murine babesiosis.

CONTROLLED TERM: ***Adjuvants, Immunologic**
Animals
Antibodies: AN, analysis
*Babesia: IM, immunology
*Babesiosis: IM, immunology
Drug Evaluation, Preclinical
***Glucans: IM, immunology**
Lymphocyte Activation
Mice
Mice, Inbred BALB C
Research Support, Non-U.S. Gov't
Research Support, U.S. Gov't, P.H.S.
Vaccination
*Vaccines: IM, immunology
CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Antibodies); 0 (Glucans); 0 (Vaccines)

L188 ANSWER 17 OF 63 MEDLINE on STN
ACCESSION NUMBER: 82277650 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7051368
TITLE: Immunopotentiation of anticancer chemotherapy by Candida albicans, other yeasts and insoluble glucan in an experimental lymphoma model.
AUTHOR: Cassone A; Bistoni F; Cenci E; Pesce C D; Tissi L; Marconi P
SOURCE: Sabouraudia, (1982 Jun) 20 (2) 115-25.
Journal code: 0417341. ISSN: 0036-2174.
PUB. COUNTRY: SCOTLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198210
ENTRY DATE: Entered STN: 19900317

Last Updated on STN: 19900317
Entered Medline: 19821021

ABSTRACT:
Several yeast species in the genera Candida, Saccharomyces and Cryptococcus showed powerful immunoadjuvant, chemotherapy-synergic effects against a histocompatible, virus-induced murine lymphoma. Sensitizing and booster intraperitoneal injections of 2 x 10(7) yeast cells on days -14 and +1 (with respect to tumor challenge on day 0) followed by treatment with antiblastic drugs (on day +5) were required to elicit optimum activity. The antitumor effect was not markedly influenced by the morphological growth form of merthiolate-inactivated C. albicans nor by the nature of the carbon source in the growth medium, except for C. albicans cells grown in a medium containing stearic acid, which were not effective. These cells had a higher ratio of soluble to insoluble cell wall components, as compared to glucose-grown cells, but this finding alone could hardly explain the lack of antitumor effects. Previous observations, suggesting that the alkali-acid insoluble beta-glucan (in the form of cell wall ghosts) is the only component of yeast cell walls endowed with antitumor activity comparable to that of whole cells, were confirmed and extended; the soluble mannan and glucan-protein fractions were unable to replace whole cells and glucan ghosts even as sensitizers or as boosting agents.

CONTROLLED TERM: ***Adjuvants, Immunologic: TU, therapeutic use**
Animals
*Antineoplastic Agents: TU, therapeutic use
Candida albicans: AN, analysis
Candida albicans: CY, cytology
Candida albicans: IM, immunology
Carmustine: TU, therapeutic use
Cell Wall: AN, analysis
Cryptococcus: IM, immunology
Culture Media
Fluorouracil: TU, therapeutic use
***Glucans: IM, immunology**
*Lymphoma: TH, therapy
Mice
Neoplasms, Experimental: TH, therapy
Research Support, Non-U.S. Gov't
Saccharomyces
*Yeasts: IM, immunology

CAS REGISTRY NO.: 154-93-8 (Carmustine); 51-21-8 (Fluorouracil)
CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Antineoplastic Agents); 0 (Culture Media); 0 (Glucans)

L188 ANSWER 18 OF 63 MEDLINE on STN
ACCESSION NUMBER: 81238596 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7019074
TITLE: Glucan-enhanced immunogenicity of killed erythrocyte stages of Plasmodium berghei.
AUTHOR: Holbrook T W; Cook J A; Parker B W
SOURCE: Infection and immunity, (1981 May) 32 (2) 542-6.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198109
ENTRY DATE: Entered STN: 19900316
Last Updated on STN: 19970203
Entered Medline: 19810915
ABSTRACT:

Intravenous injections of glucan simultaneously with Formalin-killed erythrocytic stages of Plasmodium berghei elicited a greater degree of resistance in mice against subsequent infection with viable parasites than injections of killed erythrocytic stages alone. In two experiments with P. berghei strain NK 65, 100% of mice immunized with the glucan-dead parasite preparation survived challenge, whereas only 28.6% of mice receiving dead parasites alone survived. In the third experiment, using P. berghei strain NYU-2, the same proportion of mice survived after immunization with glucan and dead parasites as with dead parasites alone (i.e., 10 of 11 in each group), but mice immunized with the glucan-dead parasite preparation experienced parasitemias of significantly less intensity and shorter duration than mice which received only dead parasites before infection. Inoculation of glucan alone or with normal erythrocytes conferred no protection against challenge.

CONTROLLED TERM: ***Adjuvants, Immunologic**
Animals
Erythrocytes: PS, parasitology
***Glucans: IM, immunology**
Immunization
Immunization Schedule
*Malaria: IM, immunology
Malaria: PS, parasitology
Mice
*Plasmodium berghei: IM, immunology

CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Glucans)

L188 ANSWER 19 OF 63 DRUGU COPYRIGHT 2006 THE THOMSON CORP on STN DUPLICATE 6

ACCESSION NUMBER: 1989-45413 DRUGU P
TITLE: Immunomodulation by Orally Administered beta-Glucan in Mice.
AUTHOR: Suzuki I; Hashimoto K; Ohno N; Tanaka H; Yadomae T
LOCATION: Tokyo, Japan
SOURCE: Int.J.Immunopharmacol. (11, No. 7, 761-69, 1989) 3 Fig. 3 Tab. 36 Ref.
CODEN: IJIMDS ISSN: 0192-0561
AVAIL. OF DOC.: Laboratory of Immunopharmacology of Microbial Products, Tokyo College of Pharmacy, Horinouchi 1432-1, Hachioji, Tokyo 192-03, Japan.
LANGUAGE: English
DOCUMENT TYPE: Journal

ABSTRACT:

SSG, a beta-1,3-D-glucan, given p.o. to mice, augmented the proliferative response of spleen cells to Con-A or lipopolysaccharide (LPS).P.o.SSG also enhanced the activities of both natural killer (NK) cells in spleen and lysosomal enzymes of peritoneal macrophages. Augmentation of NK cells by SSG was less than that of poly I:C (Yamasa-Shoyu). SSG also possessed antitumor effects in IMC carcinoma and Meth A fibrosarcoma-bearing mice. A more purified SASG (P-SSG) produced similar effects. Results show that p.o. SSG can potentiate the immune response of mice.

SECTION HEADING: P Pharmacology

CLASSIF. CODE: 20 Immunological
50 Biological Response Modifiers
52 Chemotherapy - non-clinical

CONTROLLED TERM:
[01] **GLUCAN-BETA-1,3-D** *PH; METH-A *OC; FIBROSARCOMA *OC; ANIMAL-NEOPLASM *OC; CARCINOMA *OC; CONCANAVALIN-A *RC;

ENDOTOXIN *RC; POLY-I-C *RC; YAMASA-SHOYU *FT; NAT.KILLER-CELL *FT; P.O. *FT; SPLEEN-CELL *FT; MACROPHAGE *FT; CYTOSTATIC *FT; MOUSE *FT; IN-VIVO *FT; **IMMUNOSTIMULANT** *FT; **IMMUNE-RESPONSE** *FT; TOXINS *FT; **LYMPHOCYTE** *FT; RES *FT; LAB.ANIMAL *FT; IMMUNITY *FT; GLUCAB13D *RN; PH *FT

FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature

L188 ANSWER 20 OF 63 DRUGU COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2000-01820 DRUGU P
TITLE: Comparison of the effect of different immunological adjuvants on the antibody and T cell response to immunization with MUC1-KLH and GD3-KLH conjugate cancer vaccines.
AUTHOR: Kim S K; Ragupathi G; Musselli C; Choi S J; Park Y S; Livingston P O
CORPORATE SOURCE: Memorial-Sloan-Kettering-Cancer-Cent.; Univ.Yonsei; Univ.Kwandong
LOCATION: New York, N.Y., USA; Wonju; Kangnung, South Korea
SOURCE: Vaccine (18, No. 7-8, 597-603, 1999) 6 Tab. 20 Ref.
CODEN: VACCDE ISSN: 0264-410X
AVAIL. OF DOC.: Laboratory of Developmental Tumor Vaccinology, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021, U.S.A. (P.O.L.).
LANGUAGE: English
DOCUMENT TYPE: Journal

ABSTRACT:

19 Immunological adjuvants (Adjuvax, Betafectin GG-glucan (both Alpha-Beta-Technologies), CRL-1005 (Vaxcel), CpG ODN (CpG pharmaceutics), DTP-N-GDP (amide/dextrose) (Endorex), Detox-PC, MPL-SE (both Ribi), GERBU adjuvant 10 (Biotech-Corp), MoGM-CSF (Lexigen), PSC97B adjuvant (Protein Sci.), QS-21 (Aquila), TiterMax Gold (CytRx), Adjumer, beta-alethine +/-peptide, GSK-1, GcMAF, MPC-026, PG-026) were compared for potentiation of spleen lymphocyte proliferation, cytokine release and antibody responses after s.c. immunization with keyhole limpet hemocyanin (KLH) conjugates with the human cancer antigens MUC1 peptide and GD3 ganglioside. Overall, QS-1 was the most effective.

SECTION HEADING: P Pharmacology

CLASSIF. CODE: 20 Immunological
50 Biological Response Modifiers
52 Chemotherapy - non-clinical
73 Trial Preparations

CONTROLLED TERM:
IN-VIVO *FT; MOUSE *FT; S.C. *FT; SPLEEN-CELL *FT; PROLIFERATION *FT; CELL-MEDIATED *FT; **IMMUNE-RESPONSE** *FT; INTERFERON-GAMMA *FT; INTERLEUKIN-4 *FT; LAB.ANIMAL *FT; INJECTION *FT; **LYMPHOCYTE** *FT; IMMUNITY *FT; LAB.ANIMAL *FT; INJECTION *FT; **LYMPHOCYTE** *FT; IMMUNITY *FT
[01] KEYHOLE-LIMPET-HEMOCYANIN *PH; KEYHOLELI *RN; VACCINE *FT; CONJUGATE *FT; IMMUNIZATION *FT; PH *FT; PH *FT
[02] **GLUCAN-BETA-1,3-D** *PH; ADJUVAX *PH; GLUCAB13D *RN; ADJUVANT *FT; DRUG-COMPARISON *FT; ALPHA-BETA-TECHNOL. *FT; **IMMUNOSTIMULANTS** *FT; PH *FT
[03] ALETHINE-BETA *PH; DR9501199 *RN; ADJUVANT *FT;

DRUG-COMPARISON *FT; ADJUVANTS *FT; CYTOSTATICS *FT; PH *FT; PH *FT
[04] BETAFECTIN *PH; BETAFECTI *RN; ADJUVANT *FT; DRUG-COMPARISON *FT; ALPHA-BETA-TECHNOL. *FT; PH *FT
[05] CRL-1005 *PH; DR9703386 *RN; ADJUVANT *FT; DRUG-COMPARISON *FT; ADJUVANTS *FT; VAXCEL *FT; TRIAL-PREP. *FT; **IMMUNOSTIMULANTS** *FT; PH *FT; PH *FT
[06] DETOX *PH; RIBI-IMMUNOCHEM. *FT; DETOX *RN; DETOX *RN; ADJUVANT *FT; DRUG-COMPARISON *FT; ADJUVANTS *FT; **IMMUNOSTIMULANTS** *FT; PH *FT; ADJUVANTS *FT; **IMMUNOSTIMULANTS** *FT; PH *FT
[07] COLONY-STIMULATING-FACTOR-GM *PH; CSF-GM *RN; ADJUVANT *FT; DRUG-COMPARISON *FT; LEXIGEN *FT; PH *FT; PH *FT
[08] QUILLAJA-SAPONIN *PH; QS-21 *PH; QUILLAJSA *RN; ADJUVANT *FT; DRUG-COMPARISON *FT; AQUILA *FT; ADJUVANTS *FT; **IMMUNOSTIMULANTS** *FT; ADJUVANTS *FT; **IMMUNOSTIMULANTS** *FT; PH *FT
[09] TITERMAX *PH; TITERMAX *RN; ADJUVANT *FT; DRUG-COMPARISON *FT; ADJUVANTS *FT; CYTRX *FT; PH *FT

FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature

L188 ANSWER 21 OF 63 DRUGU COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 1999-34186 DRUGU T M
TITLE: Fluconazole versus amphotericin B for the prevention of fungal infection in neutropenic patients with hematologic malignancy.
AUTHOR: Takatsuka H; Takemoto Y; Okamoto T; Fujimori Y; Tamura S; Wada H; Okada M; Kanamaru A; Kakishita E
CORPORATE SOURCE: Hyogo-Coll.Med.; Univ.Kinki
LOCATION: Hyogo; Osaka; Jap.
SOURCE: Drugs Exp.Clin.Res. (25, No. 4, 193-200, 1999) 2 Fig. 4 Tab. 35 Ref.
CODEN: DECRDP ISSN: 0378-6501
AVAIL. OF DOC.: Second Department of Internal Medicine, Hyogu College of Medicine, 1-1 Mukogawacho, Nishinomiya, Hyogo 663-8501, Japan. (e-mail: hematol@hyo-med.ac.jp).
LANGUAGE: English
DOCUMENT TYPE: Journal

ABSTRACT:

P.o. fluconazole (FLC, Pfizer) reduced fungal infection to a greater extent than amphotericin B (AMB, Bristol-Myers Squibb) in a study of 124 patients with hematological malignancy and neutropenia. Although the use of idarubicin HCl by patients in the FLC group led to a greater reduction in WBC and absolute neutrophil levels, the febrile/neutropenic ratio and the beta-D glucan level were lower in the AMB group. FLC reduced the isolation of Candida albicans and C. glabrata from throat swabs and sputum. Concomitant treatment included polymyxin B tablets (Pfizer), amphotericin B suspension, inhaled amphotericin B and ciprofloxacin (Bayer). FLC may be more effective than AMB for fungal prophylaxis in patients with hematological malignancy and neutropenia.

SECTION HEADING: T Therapeutics
M Microbiology

CLASSIF. CODE: 53 Infection
55 Fungicides

CONTROLLED TERM:

NEUTROPENIA *OC; ACUTE *OC; MYELOGENOUS *OC; LEUKEMIA *OC; LYMPHOBLASTIC *OC; PRELEUKEMIA *OC; NONHODGKIN *OC; LYMPHOMA *OC; CHRON. *OC; MYELOID *OC; ADULT *OC; **THYMOCYTE** *OC; INFECTION,FUNGUS *TR; LYMPHOPROLIFERATIVE-DISEASE *OC; MARROW-DISEASE *OC; POLYMYXIN-B *RC; AMPHOTERICIN-B *RC; CIPROFLOXACIN *RC; CASES *FT; IN-VIVO *FT; FUNGICIDE *FT; NEUTROPHIL *FT; **GLUCAN-BETA-1,3-D** *FT; CANDIDA *FT; ALBICANS *FT; GLABRATA *FT; P.O. *FT; LEUKOCYTE *FT; PROPHYLAXIS *FT; THROAT *FT; SPUTUM *FT; FECES *FT; KRUSEI *FT; TROPICALIS *FT; LEUKOCYTE *FT; FUNGUS *FT; ORL *FT
[01] FLUCONAZOLE *TR; FLUCONAZOLE *PH; PFIZER *FT; IDARUBICIN *RC; FLUCONAZO *RN; FUNGICIDES *FT; TR *FT; PH *FT
CAS REGISTRY NO.: 86386-73-4
[02] AMPHOTERICIN-B *TR; AMPHOTERICIN-B *PH; BRISTOL-SQUIBB *FT; AMPHOTERI *RN; ANTIBIOTICS *FT; FUNGICIDES *FT; TR *FT; PH *FT
CAS REGISTRY NO.: 1397-89-3
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature

L188 ANSWER 22 OF 63 DRUGU COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 1997-00016 DRUGU M T
TITLE: The use of glucan as immunostimulant in the treatment of paracoccidioidomycosis.
AUTHOR: Meira D A; Pereira P C M; Marcondes Machado J; Mendes R P; Barraviera B; Pellegrino J Jr; Rezkallah Iwasso M T; Peracoli M T S; Castilho L M; Thomazini I; Da Silva C L; Foss N T; Curi P R
CORPORATE SOURCE: Univ.Sao-Paulo
LOCATION: Sao Paulo, Braz.
SOURCE: Am.J.Trop.Med.Hyg. (55, No. 5, 496-503, 1996) 5 Fig. 3 Tab. 45 Ref.
CODEN: AJTHAB ISSN: 0002-9637
AVAIL. OF DOC.: Departamento de Doencas Tropicais e Diagnostico por Imagem, Faculdade de Medicina de Botucatu, Botucatu, Sao Paulo, 18618-000, Brazil.
LANGUAGE: English
DOCUMENT TYPE: Journal

ABSTRACT:

Long-term i.v. beta-1,3D-glucan (GN) immunostimulation afforded an improved response to specific antifungal therapy in 10 male patients with predominantly severe paracoccidioidomycosis (Paracoccidioides brasiliensis) when compared to antifungal therapy on its own in 8 male patients with moderate paracoccidioidomycosis. After GN treatment, ESR values were higher, serum antibodies to P. brasiliensis were lower, the PHA skin-test gave a positive reaction and the helper-cell count tended to be higher. Moreover, during GN treatment, there was a rise in the serum tumor necrosis factor (TNF) level. Antifungal medication included amphotericin B (AB), ketoconazole (KC), sulfanilamide (SA), sulfadiazine (SD) and sulfamethoxazole plus trimethoprim (SM + TM).

SECTION HEADING: M Microbiology
T Therapeutics

CLASSIF. CODE: 20 Immunological
50 Biological Response Modifiers
53 Infection

CONTROLLED TERM:
[01] **GLUCAN-BETA-1,3-D** *TR; SEVERE *TR; INFECTION,FUNGUS *TR; AMPHOTERICIN-B *RC; KETOCONAZOLE *RC; GLUCAB13D *RN; CASES *FT; IN-VIVO *FT; PARACOCCIDIOIDES *FT; BRASILIENSIS *FT; LONG-TERM-THERAPY *FT; I.V. *FT; **IMMUNOSTIMULANT** *FT; CELL-MEDIATED *FT; IMMUNITY *FT; HELPER-CELL *FT; COUNT *FT; BLOOD-SERUM *FT; TUMOR-NECROSIS-FACTOR *FT; CONC. *FT; FUNGUS *FT; INJECTION *FT; **LYMPHOCYTE** *FT; **THYMOCYTE** *FT; TR *FT
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature

L188 ANSWER 23 OF 63 DRUGU COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 1996-11613 DRUGU P
TITLE: Pulmonary metastases neutralization and tumor rejection by in vivo administration of beta glucan and bispecific antibody.
AUTHOR: Penna C; Dean P A; Nelson H
LOCATION: Rochester, Minn., USA
SOURCE: Int.J.Cancer (65, No. 3, 377-82, 1995) 5 Fig. 3 Tab. 21 Ref.
CODEN: IJCNAW ISSN: 0020-7136
AVAIL. OF DOC.: Mayo Clinic, 200 First Street S.W., Rochester, MN 55905, USA. (H.N.).
LANGUAGE: English
DOCUMENT TYPE: Journal

ABSTRACT:

The Authors tested whether i.p. beta glucan (Sigma-Chemical) could in situ-activate T cells, which could secondarily be retargeted with bispecific antibodies (BsAbs; i.v.) to lyse tumor cells. The resulting anti-tumor effects were evaluated in a murine melanoma model. Therapeutic effects were then compared to those obtained with adoptively transferred, in vitro-activated lymphocytes retargeted with BsAb. In the neutralization model, there was a reduction in the number of metastases in the beta glucan + BsAb group vs. controls, and with beta glucan alone. In the established tumor model, beta glucan + BsAb reduced the incidence of s.c. tumors as compared with control, with BsAb alone and with beta glucan alone. It also prolonged survival of tumor-bearing mice compared with control, BsAb alone and beta glucan alone. T-cells can be activated by beta glucan and retargeted with F(ab')2 BsAb.

SECTION HEADING: P Pharmacology

CLASSIF. CODE: 20 Immunological
52 Chemotherapy - non-clinical

CONTROLLED TERM:
ANIMAL-NEOPLASM *OC; LUNG *OC; MELANOMA *OC; METASTASIS *OC; PNEUMOPATHY *OC; CYTOSTATIC *FT; IN-VITRO *FT; IN-VIVO *FT; INJECTION *FT; LAB.ANIMAL *FT; LYMPHOCYTE *FT; MOUSE *FT; NEUTRALIZATION *FT; PH *FT; SURVIVAL *FT; **THYMOCYTE** *FT
[01] ANTIBODY *FT; I.V. *FT; MONOCLONAL *FT
[02] **GLUCAN-BETA-1,3-D** *PH; GLUCAB13D *RN; SIGMA-CHEM. *FT; I.P. *FT
CAS REGISTRY NO.: **9051-97-2**
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature

L188 ANSWER 24 OF 63 DRUGU COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 1993-47257 DRUGU M S

TITLE: Adverse Effects of Pefloxacin in Irradiated C3H/HeN Mice: Correction with Glucan Therapy.
AUTHOR: Patchen M L; Brook I; Elliott T B; Jackson W E
LOCATION: Bethesda, Maryland, United States
SOURCE: Antimicrob.Agents Chemother. (37, No. 9, 1882-89, 1993) 4 Fig. 34 Ref.
CODEN: AMACCQ ISSN: 0066-4804
AVAIL. OF DOC.: Department of Experimental Hematology, Armed Forces Radiobiology Research Institute, Bethesda, Maryland 20889-5603, U.S.A.
LANGUAGE: English
DOCUMENT TYPE: Journal

ABSTRACT:

Pefloxacin methanesulfonate dihydrate (PF, Rhone-Poulenc) given p.o. enhanced mortality following exposure of mice to radiation, despitereduction of translocation of bacteria from bloodstream to liver. I.v. glucan-beta-1,3-D (GC, from Sacch. cerevisiae) alone enhanced survival while GC + PF enhanced survival beyond that observed with GC alone. PF suppressed granulocyte-macrophage progenitor cell (GM-CFC) recovery; GC stimulated GM-CFC recovery while GC administered in combination with PF could override the hemopoietic suppressive effect of PF.

SECTION HEADING: M Microbiology
S Adverse Effects

CLASSIF. CODE: 20 Immunological
34 Toxicology
50 Biological Response Modifiers
54 Antiseptics

CONTROLLED TERM:
IN-VIVO *FT; MOUSE *FT; IRRADIATION *FT; ALONE *FT; COMB. *FT; MORTALITY *FT; SURVIVAL *FT; GRANULOCYTE *FT; MACROPHAGE *FT; SPLEEN-CELL *FT; LAB.ANIMAL *FT; LEUKOCYTE *FT; RES *FT; **LYMPHOCYTE** *FT
[01] PEFLOXACIN *PH; PEFLOXACIN *AE; RHONE-POULENC *FT; INFECTION,BACT. *OC; MARROW-DEPRESSION *AE; MARROW-DISEASE *AE; MESILATE *PH; MESILATE *AE; PEFLOXACI *RN; P.O. *FT; TOX. *FT; ANTISEPTIC *FT; ANTISEPTICS *FT; PH *FT; AE *FT
CAS REGISTRY NO.: 70458-92-3
[02] **GLUCAN-BETA-1,3-D** *PH; MARROW-DEPRESSION *OC; MARROW-DISEASE *OC; GLUCAB13D *RN; I.V. *FT; **IMMUNOSTIMULANT** *FT; INJECTION *FT; PH *FT
CAS REGISTRY NO.: **9051-97-2**
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature

L188 ANSWER 25 OF 63 DRUGU COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 1991-44207 DRUGU C P
TITLE: Mitogenic and Colony-Stimulating Factor-Inducing Activities of Polysaccharide Fractions from the Fruit Bodies of Dictyophora indusiata FISCH.
AUTHOR: Hara C; Kumazawa Y; Inagaki K; Kaneko M; Kiho T; Ukai S
LOCATION: Gifu, Tokyo, Japan
SOURCE: Chem.Pharm.Bull. (39, No. 6, 1615-16, 1991) 2 Tab. 18 Ref.
CODEN: CPBTAL ISSN: 0009-2363
AVAIL. OF DOC.: Shotoku Gakuen Women's Junior College, 1-38, Nakauzura, Gifu 500, Japan.

LANGUAGE: English
DOCUMENT TYPE: Journal

ABSTRACT:

Mitogenic and colony stimulating factor (CSF) activities of 5 homogeneous polysaccharide and a conjugated polysaccharide fraction isolated from the fruiting bodies of Dictyophora indusiata were investigated. Fucomannogalactan (T-3-Ad) and conjugated polysaccharide fraction (T-2-A) showed significant mitogenic and CSF inducing activities (i.p. in mice). Of 2 beta-(1-6)-branched (1-3)-beta-D-glucans (T-4-N and T-5-N), only T-4-N showed both mitogenic and CSF inducing activities. Partially acetylated (1-3)-alpha-mannans (T-2-HN and T-3-M') were not significantly active.

SECTION HEADING: C Chemistry
P Pharmacology

CLASSIF. CODE: 20 Immunological
71 Medicinal Chemistry

CONTROLLED TERM:
ISOL. *FT; DICTYOPHORA *FT; INDUSIATA *FT; FUNGUS *FT; MITOGEN *FT; COLONY-STIMULATING-FACTOR *FT; INDUCTION *FT; **IMMUNOSTIMULANT** *FT; SPLEEN-CELL *FT; IN-VITRO *FT; IN-VIVO *FT; I.P. *FT; MOUSE *FT; **LYMPHOCYTE** *FT; INJECTION *FT; LAB.ANIMAL *FT
[01] **GLUCAN-BETA-1,3-D** *OC; **GLUCAN-BETA-1,3-D** *PH; GLUCAB13D *RN; OC *FT; PH *FT
CAS REGISTRY NO.: **9051-97-2**
[02] MANNAN *OC; MANNAN *PH; MANNAN *RN; OC *FT; PH *FT
CAS REGISTRY NO.: 51395-96-1
[03] POLYSACCHARIDE *FT; OC *FT; PH *FT
FIELD AVAIL.: AB; LA; CT; MPC
FILE SEGMENT: Literature

L188 ANSWER 26 OF 63 DRUGU COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 1991-37445 DRUGU P
TITLE: Oral Administration of SSG, a beta-Glucan Obtained from Sclerotinia sclerotiorum, Affects the Function of Peyer's Patch Cells.
AUTHOR: Hashimoto K; Suzuki I; Yadomae T
LOCATION: Tokyo, Japan
SOURCE: Int.J.Immunopharmacol. (13, No. 4, 437-42, 1991) 1 Fig. 1 Tab. 26 Ref.
CODEN: IJIMDS ISSN: 0192-0561
AVAIL. OF DOC.: Laboratory of Immunopharmacology of Microbial Products, Tokyo College of Pharmacy, Horinouchi 1432-1, Hachioji, Tokyo 192-03, Japan.
LANGUAGE: English
DOCUMENT TYPE: Journal

ABSTRACT:

The effect of orally administered SSG, a beta-1,3-glucan obtained from the culture filtrate of the fungus Sclerotinia sclerotiorum IFO 9395, on the function of Peyer's patch (PP) cells was investigated in comparison with that on spleen cells in mice. Oral SSG enhanced the proliferative response of PP cells to a T-mitogen, concanavalin A (Con A), and a B cell mitogen, lipopolysaccharide (LPS), although the response of spleen cells was unaffected. PP cells taken from mice exposed previously to oral SSG showed enhanced

plaque-forming cell responses to sheep red blood cells (SRBC) after antigen (SRBC) stimulation for 5 days in-vitro. Results show that SSG can modulate the mucosal immune response.

SECTION HEADING: P Pharmacology

CLASSIF. CODE: 16 Gastrointestinal
20 Immunological
50 Biological Response Modifiers

CONTROLLED TERM:
[01] **GLUCAN-BETA-1,3-D** *PH; CONCANAVALIN-A *RC; GLYCOLIPID *RC; P.O. *FT; MOUSE *FT; IN-VIVO *FT; **IMMUNOSTIMULANT** *FT; MUCOSA *FT; PEYER-PATCH *FT; SPLEEN-CELL *FT; PROLIFERATION *FT; **IMMUNE-RESPONSE** *FT; GASTROINTEST. *FT; **THYMOCYTE** *FT; INTESTINE *FT; LAB.ANIMAL *FT; **LYMPHOCYTE** *FT; IMMUNITY *FT; GLUCAB13D *RN; PH *FT

CAS REGISTRY NO.: **9051-97-2**
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature

L188 ANSWER 27 OF 63 DRUGU COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 1990-47819 DRUGU P
TITLE: Enhancement of Hematopoietic Response of Mice by Intraperitoneal Administration of a beta-Glucan, SSG, Obtained from Sclerotinia sclerotiorum.
AUTHOR: Hashimoto K; Suzuki I; Ohsawa M; Oikawa S; Yadomae T
CORPORATE SOURCE: Nippon-Beet-Sugar
LOCATION: Tokyo, Japan
SOURCE: J.Pharmacobiodyn. (13, No. 8, 512-17, 1990) 4 Fig. 1 Tab. 20 Ref.
CODEN: JOPHDQ ISSN: 0386-846X
AVAIL. OF DOC.: Tokyo College of Pharmacy, Horinouchi, Hachioji, Tokyo 192-03, Japan.
LANGUAGE: English
DOCUMENT TYPE: Journal

ABSTRACT:

In mice, i.p. SSG (a beta-glucan isolated from Sclerotinia sclerotiorum) markedly increased the % of PMN in both spleen and peripheral blood, increased the numbers of macrophage progenitor cells in both spleens and femurs, and increased levels of colony-stimulating activity (CSA) in sera. The results suggest that i.p. SSG in mice enhances the production of colony-stimulating factors (CSFs) and then increases the numbers of both spleen and peripheral blood leukocytes.

SECTION HEADING: P Pharmacology

CLASSIF. CODE: 20 Immunological
50 Biological Response Modifiers
52 Chemotherapy - non-clinical

CONTROLLED TERM:
[01] **GLUCAN-BETA-1,3-D** *PH; IN-VIVO *FT; MOUSE *FT; I.P. *FT; MARROW *FT; POLYMORPHONUCLEAR *FT; SPLEEN *FT; BLOOD *FT; MACROPHAGE *FT; PERIPHERAL *FT; MONOCYTE *FT; BLOOD-SERUM *FT; **LYMPHOCYTE** *FT; COLONY-FORMING-UNIT *FT; PERITONEAL *FT; LAB.ANIMAL *FT;

INJECTION *FT; LEUKOCYTE *FT; RES *FT; GLUCAB13D *RN; PH *FT
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature

L188 ANSWER 28 OF 63 DRUGU COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 1989-21277 DRUGU C P
TITLE: Antitumor and Immunomodulating Activities of a beta-Glucan Obtained from Liquid-Cultured Grifola Frondosa.
AUTHOR: Suzuki I; Hashimoto K; Oikawa S; Sato K; Osawa M; Yadomae T
CORPORATE SOURCE: Nippon-Beet-Sugar
LOCATION: Tokyo, Japan
SOURCE: Chem.Pharm.Bull. (37, No. 2, 410-13, 1989) 1 Fig. 4 Tab. 16 Ref.
CODEN: CPBTAL ISSN: 0009-2363
AVAIL. OF DOC.: Tokyo College of Pharmacy, Horinouchi, Hachioji, Tokyo 192-03, Japan.
LANGUAGE: English
DOCUMENT TYPE: Journal

ABSTRACT:

A beta-1,3-glucan (LELFD) from Grifola frondosa mycelium had i.p. and intra-lesional (i.l.) antitumor activity against Meth A fibrosarcoma and IMC carcinoma in mice but, like lentinan (LE, Yamanouchi), was without effect on L1210 and P388 leukemias. The activities of natural killer (NK) spleen cells and macrophages in mice were enchanced by i.p. LELFD which also potentiated antibody responses to sheep RBC and activated the alternate complement pathway.

SECTION HEADING: C Chemistry
P Pharmacology

CLASSIF. CODE: 20 Immunological
50 Biological Response Modifiers
52 Chemotherapy - non-clinical
71 Medicinal Chemistry

CONTROLLED TERM:
[01] **GLUCAN-BETA-1,3-D** *OC; **GLUCAN-BETA-1,3-D** *PH; P388 *OC; ANIMAL-NEOPLASM *OC; LEUKEMIA *OC; L1210 *OC; METH-A *OC; FIBROSARCOMA *OC; CARCINOMA *OC; LENTINAN *RC; PICIBANIL *RC; ISOL. *FT; GRIFOLA *FT; FRONDOSA *FT; IN-VITRO *FT; IN-VIVO *FT; I.P. *FT; INTRATUMOR *FT; CYTOSTATIC *FT; MOUSE *FT; **IMMUNOSTIMULANT** *FT; NAT.KILLER-CELL *FT; STIMULATION *FT; MACROPHAGE *FT; ACTIVATION *FT; YAMANOUCHI *FT; COMPLEMENT *FT; ANTIBODY-RESPONSE *FT; MUSHROOM *FT; INJECTION *FT; LAB.ANIMAL *FT; **LYMPHOCYTE** *FT; RES *FT; IMMUNITY *FT; GLUCAB13D *RN; OC *FT; PH *FT
FIELD AVAIL.: AB; LA; CT; MPC
FILE SEGMENT: Literature

L188 ANSWER 29 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2001:635920 CAPLUS
DOCUMENT NUMBER: 135:185438
TITLE: Non-antigenic mucosal adjuvant formulation
INVENTOR(S): Raa, Jan; Berstad, Aud Kathrine Herland; Bakke, Hilde; Haneberg, Bjorn; Haugen, Inger Lise; Holst, Johan;

Janakova, Liba; Korsvold, Gro Ellen; Oftung, Fredrik
PATENT ASSIGNEE(S): Biotec Asa, Norway
SOURCE: PCT Int. Appl., 19 pp
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001062283	A2	20010830	WO 2001-IB144	20010202
WO 2001062283	A3	20020214		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002009463	A1	20020124	US 2000-511582	20000223
EP 1259259	A2	20021127	EP 2001-912024	20010202
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003523401	T2	20030805	JP 2001-561347	20010202
AU 771205	B2	20040318	AU 2001-40943	20010202
NO 2002003935	A	20021015	NO 2002-3935	20020819
US 2003104010	A1	20030605	US 2002-203280	20021007
PRIORITY APPLN. INFO.:			US 2000-511582 A	20000223
			WO 2001-IB144 W	20010202

ED Entered STN: 31 Aug 2001
AB An adjuvant for ~~mucosal vaccines~~ which modulates the effects of substances, including vaccine antigens in contact with mucosal body surfaces is described. Thus, a formulation containing (1→3)-β-D-glucan enhanced the prodn.of IgG against influenza vaccine antigens.
IC ICM A61K039-39
ICS A61K039-00; A61K039-145; A61K031-573; A61P037-04; A61P037-08; A61P011-08; A61P019-02; A61P031-16
CC 63-3 (Pharmaceuticals)
IT **Immunostimulants**
(adjuvants; non-antigenic mucosal adjuvant vaccine formulation)
IT Allergy
Arthritis
Spleen
T cell (lymphocyte)
Vaccines
(non-antigenic mucosal adjuvant vaccine formulation)
IT **9051-97-2**, β-D- **Glucan**, (1→3)-
37361-00-5, β-D- **Glucan**, (1→6)-
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(non-antigenic mucosal **adjuvant** vaccine formulation)

L188 ANSWER 30 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
ACCESSION NUMBER: 2001:482903 CAPLUS
DOCUMENT NUMBER: 135:282915
TITLE: Th1/Th2-balancing immunomodulating activity of

gel-forming (1→3)-β-glucans from fungi

AUTHOR(S): Suzuki, Yoko; Adachi, Yoshiyuki; Ohno, Naohito; Yadomae, Toshiro
CORPORATE SOURCE: Laboratory of Immunopharmacology of Microbial Products, School of Pharmacy, Tokyo University of Pharmacy and Life Science, Tokyo, 192-0392, Japan

SOURCE: Biological & Pharmaceutical Bulletin (2001), 24(7), 811-819
CODEN: BPBLEO; ISSN: 0918-6158
PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 05 Jul 2001

AB The immunomodulating effects of various gel-forming (1→3)-β-glucans, grifolan (GRN), SSG, sonifilan (SPG) and alkaline-treated SPG (SPG-OH), on balancing helper T cell activity were examined in a murine model. Plasma from mice that were injected with GRN or SPG-OH and trinitrophenyl ovalbumin (TNP-OVA) contained TNP-specific antibodies of both IgG1 and IgG2a isotypes. Administration of SSG and TNP-OVA significantly augmented the synthesis of IgG2a antibodies, while the synthesis of IgG1 was reduced. However, SPG did not enhance the antibody response. In the culture supernatants of splenocytes obtained from GRN- or SPG-OH-administered mice, high levels of IgG1 and low levels of IgG2a and IFN γ were detected. In contrast, high levels of IgG2a and IFN γ and low levels of IgG1 were detected in the case of administration of SSG. Furthermore, it was shown by intracellular cytokine staining that the proportion of IFN γ+CD4+ double-pos. cells among the CD4+ cells from mice administered SSG was most strongly increased by addition of PMA and A23187. On the other hand, the expression of IL-12 p40 mRNA was more markedly elevated in splenocytes after combined administration of TNP-OVA plus SSG than after administration of TNP-OVA alone. The highest IFN γ production was observed when adherent cells of mice administered TNP-OVA and SSG were cultured with TNP-primed lymphocytes. This effect of administration of SSG on IFN-γ production was completely inhibited by addition of anti-IL-12 mAb. In conclusion, our study showed that β-glucans have various effects on the Th1 or Th2-dependent antibody subclasses, in particular, SSG induces the development of Th1 cells via the IL-12 pathway.

CC 1-7 (Pharmacology)

IT Polysaccharides, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(Th1/Th2-balancing **immunomodulating** activity of gel-forming (1→3)-β- **glucans** from fungi)

IT **Immunostimulants**
(adjuvants; Th1/Th2-balancing immunomodulating activity of gel-forming (1→3)-β-glucans from fungi)

IT **T cell (lymphocyte)**
(helper cell/inducer, TH1; Th1/Th2-balancing immunomodulating activity of gel-forming (1→3)-β-glucans from fungi)

IT **T cell (lymphocyte)**
(helper cell/inducer, TH2; Th1/Th2-balancing immunomodulating activity of gel-forming (1→3)-β-glucans from fungi)

IT 9050-67-3, Sonifilan 9050-67-3D, Sonifilan, single helical conformer **9051-97-2**, SSG 104074-36-4, Grifolan
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(Th1/Th2-balancing **immunomodulating** activity of gel-forming

(1→3)-β- **glucans** from fungi)
REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L188 ANSWER 31 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2006:32968 CAPLUS
TITLE: Tinospora polysaccharide as immunostimulant for treatment of proliferative diseases or infection
INVENTOR(S): Nair, P. k. Raveendran; Melnick, Steven J.; Ramachandran, Cheppail
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 43 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006009501	A1	20060112	US 2005-178620	20050711
WO 2006010069	A1	20060126	WO 2005-US24410	20050711

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: US 2004-586548P P 20040709
ED Entered STN: 13 Jan 2006
AB The invention concerns a novel polysaccharide. RR1 is an α-D-glucan polysaccharide composed of a (1→4) linked back bone and (1→6) linked branches, which has been isolated from a medicinal herb, Tinospora cordifolia. RR1 exhibits unique immune-stimulating properties, is non-cytotoxic, and non-proliferating to normal lymphocytes, as well as tumor cell lines. The subject invention also concerns compns. containing an RR1 compound and methods for modulating an immune response in a subject using RR1 compds. The invention also provides methods for the use of an RR1 compound in conjunction with an antigen to stimulate an immune response, the RR1 compound providing an adjuvant-like activity in the generation of a Th1-type immune response to the antigen.
INCL 514367000
CC 1-7 (Pharmacology)
Section cross-reference(s): 11, 15
IT INDEXING IN PROGRESS
IT Polysaccharides
RL: NPO (Natural product occurrence); **PAC (Pharmacological activity)**; PRP (Properties); PUR (Purification or recovery); **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)
(D-**glucan**; (1,4)-α-D-glycosidic linkage in main chain (1,6)-α-D-glycosidic linked side chain; Tinospora polysaccharide as **immunostimulant** for treatment of proliferative diseases or infection)

IT **Cell** activation
(**T** cell; Tinospora polysaccharide as immunostimulant for treatment of proliferative diseases or infection)
IT Anti-infective agents
Antitumor agents
Combination chemotherapy
Drugs
Embryophyta
Human
Immunostimulants
Immunotherapy
Infection
Leukemia
Macrophage
Phagocytosis
Tinospora cordifolia
(Tinospora polysaccharide as immunostimulant for treatment of proliferative diseases or infection)
IT B cell (lymphocyte)
Macrophage
T cell (lymphocyte)
Transcriptional regulation
(activation; Tinospora polysaccharide as immunostimulant for treatment of proliferative diseases or infection)
IT **Immunostimulants**
(adjuvants; Tinospora polysaccharide as immunostimulant for treatment of proliferative diseases or infection)
IT Growth factors, animal
Interferons
Interleukins
Lymphokines
Platelet-derived growth factors
Tumor necrosis factors
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(and α-D- **glucan** polysaccharide; pharmaceutical compns. containing; Tinospora polysaccharide as **immunostimulant** for treatment of proliferative diseases or infection)
IT **T cell (lymphocyte)**
(helper cell/inducer, TH1, -stimulated cytokine production; Tinospora polysaccharide as immunostimulant for treatment of proliferative diseases or infection)
IT 9074-78-6DP, α-D- **Glucan**, branched
RL: NPO (Natural product occurrence); **PAC (Pharmacological activity)**; PRP (Properties); PUR (Purification or recovery); **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)
(RR1; Tinospora polysaccharide as **immunostimulant** for treatment of proliferative diseases or infection)
IT **9008-22-4**, Laminarin
RL: BSU (Biological study, unclassified); **PAC (Pharmacological activity)**; BIOL (Biological study)
(Tinospora polysaccharide as **immunostimulant** for treatment of proliferative diseases or infection)
IT 9061-61-4, Nerve growth factor 139639-23-9, tissue plasminogen activator
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(and α-D- **glucan** polysaccharide; pharmaceutical compns. containing; Tinospora polysaccharide as **immunostimulant** for treatment of proliferative diseases or infection)

L188 ANSWER 32 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:902155 CAPLUS
DOCUMENT NUMBER: 141:384286
TITLE: Novel encochleation methods, cochleates and methods of use
INVENTOR(S): Mannino, Raphael J.; Gould-Fogerite, Susan; Krause-Elsmore, Sara L.; Delmarre, David; Lu, Ruying
PATENT ASSIGNEE(S): Biodelivery Sciences International, Inc., USA; University of Medicine and Dentistry of New Jersey
SOURCE: PCT Int. Appl., 195 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2004091578	A2	20041028	WO 2004-US11026		20040409
WO 2004091578	C1	20050127			
WO 2004091578	A3	20050331			
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
US 2005013854	A1	20050120	US 2004-822230		20040409
PRIORITY APPLN. INFO.:			US 2003-461483P	P	20030409
			US 2003-463076P	P	20030415
			US 2003-499247P	P	20030828
			US 2003-502557P	P	20030911
			US 2003-532755P	P	20031224
			US 2004-537252P	P	20040115
			US 2004-556192P	P	20040324

ED Entered STN: 28 Oct 2004
AB The invention generally relates to cochleate drug delivery vehicles. Disclose are novel methods for making cochleates and cochleate compns. that include introducing a cargo moiety to a liposome in the presence of a solvent. Also disclosed are cochleates and cochleate compns. that include an aggregation inhibitor, and optionally, a cargo moiety. Addnl., anhydrous cochleates that include a protonized cargo moiety, a divalent metal cation and a neg. charge lipid are disclosed. Methods of using the cochleate compns. of the invention, including methods of administration, are also disclosed.
IC ICM A61K009-127
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 2, 17, 18
IT Blood coagulation
Immunity
(disorder; novel encochleation methods and cochleates and methods of use for delivery of drugs and other agents using liposomes and aggregation inhibitors)
IT Adenoma

Aggregation
Alopecia
Alzheimer's disease
Analgesics
Anesthetics
Animal virus
Anti-Alzheimer's agents
Anti-infective agents
Antiarthritics
Antiasthmatics
Antibacterial agents
Antibiotics
Anticholesteremic agents
Anticoagulants
Anticonvulsants
Antidepressants
Antidiabetic agents
Antihistamines
Antihypertensives
Antihypotensives
Antimicrobial agents
Antiobesity agents
Antioxidants
Antiparkinsonian agents
Antipsychotics
Antirheumatic agents
Antitumor agents
Antiviral agents
Arthritis
Asthma
Atherosclerosis
Autoimmune disease
Biliary tract, neoplasm
Carcinoma
Carcinoma
Cations
Chelating agents
Cholinergic antagonists
Cognition enhancers
Cystic fibrosis
Cytoprotective agents
Cytotoxic agents
Dairy products
Decongestants
Detergents
Eczema
Esophagus, neoplasm
Expectorants
Flavoring materials
Fungicides
Gene therapy
Genetic vectors
Ginkgo
Gout
Graves' disease
Gums and Mucilages
Headache
Hemophilia
Hemostatics
Hypercholesterolemia

Hyperglycemia
Hypericum
Hypertension
Hypolipemic agents
Hypotension
Imaging agents
Immunostimulants
Immunosuppressants
Infection
Inflammation
Leukemia
Leukotriene antagonists
Lung, neoplasm
Lymphoma
Malnutrition
Mammary gland, neoplasm
Melanoma
Milk
Mouthwashes
Multiple sclerosis
Muscular dystrophy
Myasthenia gravis
Mycosis
Neoplasm
Neuroglia, neoplasm
Nutrients
Obesity
Organelle
Osteoarthritis
Ovary, neoplasm
Packaging materials
Pain
Pancreas, neoplasm
Parasiticides
Parkinson's disease
Pigments, biological
Plasmids
Prostate gland, neoplasm
Psoriasis
Psychotropics
Rheumatoid arthritis
Sarcoma
Schizophrenia
Skin, disease
Stomach, neoplasm
Sweetening agents
Testis, neoplasm
Tranquilizers
Transplant rejection
Uterus, neoplasm
Vaccines
Vasoconstrictors
Vasodilators
(novel encochleation methods and cochleates and methods of use for delivery of drugs and other agents using liposomes and aggregation inhibitors)

IT **1398-61-4**, Chitin 4004-05-1, DOPE 9000-01-5, Acacia, gum 9000-07-1, Carrageenan 9000-65-1, Gums, tragacanth 9000-69-5, Pectin 9002-89-5, Polyvinyl alcohol 9003-01-4, Polyacrylic acid 9003-39-8, Polyvinylpyrrolidone 9004-32-4, Carboxymethyl cellulose 9004-42-6,

Carboxyethyl cellulose 9004-53-9, Dextrin 9004-57-3, Ethylcellulose 9004-62-0, Hydroxyethyl cellulose 9004-64-2, Hydroxypropyl cellulose 9004-65-3, Hydroxypropylmethyl cellulose 9004-67-5, Methylcellulose 9005-18-9, Propylcellulose 9005-25-8D, Starch, hydroxypropylated high-amylose 9005-38-3, Sodium alginate 9005-82-7, Amylose 9012-76-4, Chitosan 9013-95-0, Levan 9057-02-7, Pullulan 14127-61-8, Calcium(2+), biological studies 22541-12-4, Barium(2+), biological studies 25322-68-3, Polyethylene glycol 37353-59-6, Hydroxymethyl cellulose 66457-06-5, Elsinan 70614-14-1, Dioleoylphosphatidylserine
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(novel encochleation methods and cochleates and methods of use for delivery of drugs and other agents using liposomes and aggregation inhibitors)

IT **50-99-7**, Glucose, biological studies 57-50-1, Sucrose, biological studies 69-79-4, Maltose 81-07-2, Saccharine 9050-36-6, Maltodextrin 22839-47-0, Aspartame 64519-82-0, Isomalt
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(sweetening agent; novel encochleation methods and cochleates and methods of use for delivery of drugs and other agents using liposomes and aggregation inhibitors)

IT 9012-72-0, **Glucan**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(synthesis, inhibitors; novel encochleation methods and cochleates and methods of use for delivery of drugs and other agents using liposomes and aggregation inhibitors)

L188 ANSWER 33 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:252369 CAPLUS
DOCUMENT NUMBER: 140:269531
TITLE: Autologous ghrelin and encoding nucleic acid and foreign T cell epitope conjugates for vaccination against obesity and excess body fat increase or loss in human and animal
INVENTOR(S): Boving, Tine Elisabeth Gottschalk; Klysner, Steen
PATENT ASSIGNEE(S): Pharmexa A/s, Den.
SOURCE: PCT Int. Appl., 83 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004024183	A1	20040325	WO 2003-DK592	20030912
WO 2004024183	B1	20040513		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2498739	AA	20040325	CA 2003-2498739	20030912
EP 1539232	A1	20050615	EP 2003-794825	20030912
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

NO 2005001779	A	20050411	NO 2005-1779		20050411
PRIORITY APPLN. INFO.:			DK 2002-1345	A	20020912
			US 2002-410164P	P	20020912
			WO 2003-DK592	W	20030912

ED Entered STN: 26 Mar 2004

AB Disclosed are novel methods that generally rely on immunization against autologous ghrelin. Immunization is preferably effected by administration of analogs of autologous ghrelin, said analogs being capable of inducing antibody production against the autologous ghrelin polypeptides. Especially preferred as an immunogen is autologous ghrelin, which has been modified by introduction of one single or a few foreign, immunodominant and promiscuous T-cell epitopes. Also disclosed are nucleic acid vaccination against ghrelin and vaccination using live vaccines as well as methods and means useful for the vaccination. Such methods and means include methods for the preparation of analogs and pharmaceutical formulations, as well as nucleic acid fragments, vectors, transformed cells, polypeptides and pharmaceutical formulations.

IC ICM A61K039-39
ICS A61K039-385; A61K039-00; C07K014-435; A61P003-04

CC 15-2 (Immunochemistry)
Section cross-reference(s): 3, 63

IT Animal **cell** line
(S2; autologous ghrelin and encoding nucleic acid and foreign **T** cell epitope conjugates for vaccination against obesity and excess body fat increase or loss)

IT Animal **cell** line
(SF9; autologous ghrelin and encoding nucleic acid and foreign **T** cell epitope conjugates for vaccination against obesity and excess body fat increase or loss)

IT **Immunostimulants**
(**adjuvants**; autologous ghrelin and encoding nucleic acid and foreign T cell epitope conjugates for vaccination against obesity and excess body fat increase or loss)

IT Immune tolerance
Vaccines
(auto-; autologous ghrelin and encoding nucleic acid and foreign T cell epitope conjugates for vaccination against obesity and excess body fat increase or loss)

IT Amide group
Animal
Animal **cell**
Animal **cell** line
Anorexia
Antigen presentation
Antigen-presenting **cell**
Bos taurus
Burn
Cachexia
Canis familiaris
DNA sequences
Epitopes
Eubacteria
Eukaryota
Fungi
Genetic vectors
Human
Immunostimulants
Immunotherapy
Influenza virus
Microorganism

Molecular cloning
Mus
Obesity
PCR (polymerase chain reaction)
Plant **cell**
Plasmodium falciparum
Prokaryota
Protein sequences
Protozoa
Rattus
Sterculia urens
Sus scrofa domestica
Viral vectors
Wound
Yeast
cDNA sequences
(autologous ghrelin and encoding nucleic acid and foreign **T** cell epitope conjugates for vaccination against obesity and excess body fat increase or loss)

IT B **cell** (**lymphocyte**)
T cell (**lymphocyte**)
(epitope; autologous ghrelin and encoding nucleic acid and foreign **T** cell epitope conjugates for vaccination against obesity and excess body fat increase or loss)

IT **T cell** (**lymphocyte**)
(helper cell, epitope; autologous ghrelin and encoding nucleic acid and foreign **T** cell epitope conjugates for vaccination against obesity and excess body fat increase or loss)

IT Animal **cell**
(mammalian; autologous ghrelin and encoding nucleic acid and foreign **T** cell epitope conjugates for vaccination against obesity and excess body fat increase or loss)

IT 541-59-3, Maleimide **1398-61-4**, Chitin 7693-46-1, p-Nitrophenyl chloroformate 8063-16-9, Psyllium 9000-01-5, Gum arabic 9000-07-1, Carrageenan 9000-21-9, Furcellaran 9000-28-6, Gum ghatti 9000-30-0, Guar 9000-40-2, Locust bean gum 9000-65-1, Tragacanth 9000-69-5, Pectin 9002-84-0, Polytetrafluoroethylene 9002-89-5, Poly(vinyl alcohol) 9002-98-6, PEI 9003-01-4, Polyacrylic acid 9003-05-8, Polyacrylamide 9003-39-8, Poly(vinyl pyrrolidone)) 9004-34-6, Cellulose, biological studies 9004-54-0, Dextran, biological studies 9005-25-8, Starch, biological studies 9005-32-7D, Alginic acid, derivs. 9005-79-2, Glycogen, biological studies 9011-14-7, Poly(methyl methacrylate) 9012-36-6, Agarose 9012-72-0, **Glucan** 9012-76-4, Chitosan 9014-63-5, Xylan 9036-88-8, Mannan 9037-22-3, Amylopectin 9057-02-7, Pullulan 11078-30-1, Galactomannan 11138-66-2, Xanthan 12619-70-4D, Cyclodextrin, derivs. 24937-78-8, Poly(ethylene-co-vinyl acetate) 25087-26-7, Polymethacrylic acid 25249-16-5, Poly(2-hydroxyethyl methacrylate) 25322-68-3D, Polyethylene glycol, derivs. 26780-50-7D, Poly(lactide-co-glycolide), derivs. 37294-28-3, Xyloglucan 51751-43-0D, vinylene derivs. 54991-89-8, Tamarine 83869-56-1, GM-CSF 110865-71-9, Acetan
RL: BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(autologous ghrelin and encoding nucleic acid and foreign T cell epitope conjugates for vaccination against obesity and excess body fat increase or loss)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L188 ANSWER 34 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:493559 CAPLUS
DOCUMENT NUMBER: 141:37601
TITLE: Therapy-enhancing glucan
INVENTOR(S): Cheung, Nai-kong V.
PATENT ASSIGNEE(S): Sloan-Kettering Institute for Cancer Research, USA
SOURCE: U.S. Pat. Appl. Publ., 46 pp., Cont.-in-part of Appl. No. PCT/US02/01276.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004116379	A1	20040617	US 2003-621027	20030716
WO 2002058711	A1	20020801	WO 2002-US1276	20020115
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2005018544	A2	20050303	WO 2004-US23099	20040716
WO 2005018544	A3	20050609		
WO 2005018544	C1	20051110		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2006020128	A1	20060126	US 2005-218044	20050831

PRIORITY APPLN. INFO.:

US 2001-261911P	P	20010116
WO 2002-US1276	A2	20020115
US 2003-621027	A	20030716

ED Entered STN: 18 Jun 2004

AB This invention provides a composition comprising an effective amount of glucan capable of enhancing efficacy of antibodies. This invention further provides the above compns. and a pharmaceutically acceptable carrier. This invention also provides a method for treating a subject with cancer comprising administrating the above-described composition to the subject. This invention provides a composition comprising effective amount of glucan capable of enhancing efficacy of vaccines. This invention also provides a method of treating a subject comprising administrating the above pharmaceutical composition to the subject. This invention provides a composition comprising effective amount of glucan capable of enhancing efficacy of natural antibodies. This invention provides a composition comprising effective amount of glucan capable of enhancing host immunity. This invention also provides a composition comprising effective amount of glucan capable of enhancing the action

of an agent in preventing tissue rejection.
IC ICM A61K031-739
ICS A61K039-395; A61K031-715
INCL 514054000; 424143100
CC 15-2 (Immunochemistry)
Section cross-reference(s): 1, 63
IT Antibodies and **Immunoglobulins**
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(528; antitumor vaccine therapy-enhancing **glucan**)
IT Antibodies and **Immunoglobulins**
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(C225; antitumor vaccine therapy-enhancing **glucan**)
IT Antibodies and **Immunoglobulins**
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(R24; antitumor vaccine therapy-enhancing **glucan**)
IT Brain, neoplasm
Digestive tract, neoplasm
Gene therapy
Hodgkin's disease
Immunostimulants
Leukemia
Liver, neoplasm
Lung, neoplasm
Mammary gland, neoplasm
Melanoma
Molecular weight distribution
Ovary, neoplasm
Plasmids
Stomach, neoplasm
T cell (lymphocyte)
Transplant and Transplantation
(antitumor vaccine therapy-enhancing glucan)
IT Antibodies and **Immunoglobulins**
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antitumor vaccine therapy-enhancing **glucan**)
IT Antibodies and **Immunoglobulins**
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(monoclonal; antitumor vaccine therapy-enhancing **glucan**)

L188 ANSWER 35 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:791569 CAPLUS
DOCUMENT NUMBER: 142:148164
TITLE: Immune stimulating properties of a novel polysaccharide from the medicinal plant Tinospora cordifolia
AUTHOR(S): Raveendran Nair, P. K.; Rodriguez, Sonia; Ramachandran, Reshma; Alamo, Arturo; Melnick, Steven J.; Escalon, Enrique; Garcia, Pedro I.; Wnuk, Stanislaw F.; Ramachandran, Cheppail
CORPORATE SOURCE: Research Institute, Miami Children's Hospital, Miami, FL, 33155, USA
SOURCE: International Immunopharmacology (2004), 4(13), 1645-1659
CODEN: IINMBA; ISSN: 1567-5769
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 29 Sep 2004

AB An α-D-glucan (RR1) composed of (1→4) linked back bone and (1→6) linked branches with a mol. mass of >550 kDa and exhibiting unique immune stimulating properties is isolated and characterized from the medicinal plant Tinospora cordifolia. This novel polysaccharide is noncytotoxic and nonproliferating to normal lymphocytes as well as tumor cell lines at 0-1000 μg/mL. It activated different subsets of the lymphocytes such as natural killer (NK) cells (331%), T cells (102%), and B cells (39%) at 100 μg/mL concentration The significant activation of NK cells is associated with the dose-dependent killing of tumor cells by activated normal lymphocytes in a functional assay. Immune activation by RR1 in normal lymphocytes elicited the synthesis of interleukin (IL)-1β (1080 pg/mL), IL-6 (21,833 pg/mL), IL-12 p70 (50.19 pg/mL), IL-12 p40 (918.23 pg/mL), IL-18 (27.47 pg/mL), IFN-γ (90.16 pg/mL), tumor necrosis factor (TNF)-α (2225 pg/mL) and monocyte chemoattractant protein (MCP)-1 (2307 pg/mL) at 100 μg/mL concentration, while it did not induce the production of IL-2, IL-4, IL-10, interferon (IFN)-α and TNF-β. The cytokine profile clearly demonstrates the Th1 pathway of T helper cell differentiation essential for cell mediated immunity, with a self-regulatory mechanism for the control of its overprodn. RR1 also activated the complement alternate pathway, demonstrated by a stepwise increase in C3a des Arg components. Incidentally, RR1 stimulation did not produce any oxidative stress or inducible nitric oxide synthase (iNOS) in the lymphocytes or any significant increase in nitric oxide production The water solubility, high mol. mass, activation of lymphocytes especially NK cells, complement activation, Th1 pathway-associated cytokine profile, together with a low level of nitric oxide synthesis and absence of oxidative stress confer important immunoprotective potential to this novel α-D-glucan.

CC 1-7 (Pharmacology)
Section cross-reference(s): 11

IT **T cell (lymphocyte)**
(helper cell/inducer, TH1; immune stimulating properties of a novel polysaccharide from the medicinal plant Tinospora cordifolia)

IT B cell (lymphocyte)
Cell activation
Human
Immunostimulants
Immunostimulation
T cell (lymphocyte)
Tinospora cordifolia
(immune stimulating properties of a novel polysaccharide from the medicinal plant Tinospora cordifolia)

IT 9074-78-6, α-D- **Glucan**
RL: ADV (Adverse effect, including toxicity); NPO (Natural product occurrence); **PAC (Pharmacological activity)**; PRP (Properties); BIOL (Biological study); OCCU (Occurrence)
(**immune** stimulating properties of a novel polysaccharide from the medicinal plant Tinospora cordifolia)

REFERENCE COUNT: 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L188 ANSWER 36 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:796878 CAPLUS
DOCUMENT NUMBER: 139:306530
TITLE: Flt3-ligand for enhancing immune response of vaccine against cancer, allergy and infection
INVENTOR(S): Mckenna, Hilary J.; Liebowitz, David N.; Maliszewski, Charles R.
PATENT ASSIGNEE(S): Immunex Corporation, USA

SOURCE: PCT Int. Appl., 96 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2003083083	A2	20031009	WO 2003-US9773		20030326
WO 2003083083	A3	20040624			
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
CA 2480128	AA	20031009	CA 2003-2480128		20030326
US 2004022760	A1	20040205	US 2003-401364		20030326
EP 1487477	A2	20041222	EP 2003-721501		20030326
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
JP 2005528373	T2	20050922	JP 2003-580519		20030326
PRIORITY APPLN. INFO.:			US 2002-368263P	P	20020326
			US 2002-427835P	P	20021119
			WO 2003-US9773	W	20030326

ED Entered STN: 10 Oct 2003

AB The present invention relates to methods of using Flt3-ligand (Flt3-L) in immunization protocols to enhance immune responses against vaccine antigens. Embodiments include administering Flt3-ligand prior to immunizing a subject with a vaccine, wherein the vaccine comprises at least one antigen formulated in one or more adjuvants. Methods of treating and preventing cancer, allergy and infection using Flt3-ligand immunization protocols are also provided. Methods of using Flt3-ligand immunization protocols for in vivo evaluation of antigens and adjuvants are also provided.

IC ICM C12N
CC 15-2 (Immunochemistry)
Section cross-reference(s): 63
IT AIDS (disease)
Actinomyces israelii
African swine fever virus
Allergy
Antitumor agents
Arenaviridae
Aspergillus fumigatus
Astrovirus
Bacteroides
Birnaviridae
Blastomyces dermatitidis
Borrelia burgdorferi
Bunyaviridae
Bunyavirus
CD4-positive **T cell**
CD8-positive **T cell**
Calicivirus

Candida albicans
Chlamydia trachomatis
Clostridium perfringens
Clostridium tetani
Coccidioides immitis
Coronaviridae
Coronavirus
Corynebacterium
Corynebacterium diphtheriae
Cryptococcus neoformans
Cytomegalovirus
Dengue virus
Ebola virus
Enterobacter aerogenes
Enterococcus faecalis
Enterovirus
Epitopes
Equine encephalosis virus
Erysipelothrix rhusiopathiae
Eubacteria
Filoviridae
Flaviviridae
Fusobacterium nucleatum
Granulicatella adiacens
Hantaan virus
Hantavirus
Helicobacter pylori
Hepadnaviridae
Hepatitis A virus
Hepatitis B virus
Herpesviridae
Histoplasma capsulatum
Human
Human adenovirus
Human coxsackievirus
Human echovirus
Human herpesvirus 1
Human herpesvirus 2
Human herpesvirus 3
Human immunodeficiency virus 3
Human parainfluenza virus
Human poliovirus
Immunization
Immunostimulants
Immunotherapy
Infection
Influenza virus
Iridoviridae
Klebsiella pneumoniae
Legionella pneumophila
Leishmania
Leptospira
Listeria monocytogenes
Measles virus
Melanoma
Microparticles
Microspheres
Mumps virus
Mus
Mycobacterium

Mycobacterium avium
Mycobacterium gordonae
Mycobacterium intracellulare
Mycobacterium kansasii
Mycobacterium tuberculosis
Mycosis
Nairovirus
Nanoparticles
Neisseria gonorrhoeae
Neisseria meningitidis
Norwalk virus
Orbivirus
Orthomyxoviridae
Papillomavirus
Papovaviridae
Paramyxoviridae
Parvoviridae
Parvovirus
Pasteurella multocida
Pathogen
Phlebovirus
Picornaviridae
Plasmodium falciparum
Plasmodium gonderi
Plasmodium malariae
Plasmodium vivax
Polyomavirus
Poxviridae
Protein sequences
Rabies virus
Reoviridae
Respiratory syncytial virus
Retroviridae
Rhabdoviridae
Rhinovirus
Rotavirus
Rubella virus
Sarcosporida
Schistosoma
Staphylococcus aureus
Streptobacillus moniliformis
Streptococcus agalactiae
Streptococcus anaerobius
Streptococcus bovis
Streptococcus group A
Streptococcus group B
Streptococcus pneumoniae
Streptococcus pyogenes
Taenia saginata
Taenia solium
Togaviridae
Treponema pallidum
Treponema pallidum pertenue
Trichinella
Trichomonas
Trypanosoma
Vaccines
Vaccinia virus
Variola virus
Vesicular stomatitis virus

Yellow fever virus
(Flt3-ligand for enhancing immune response of vaccine against cancer, allergy and infection)

IT **Immunostimulants**
(adjuvants, DRVs; Flt3-ligand for enhancing immune response of vaccine against cancer, allergy and infection)

IT **Immunostimulants**
(adjuvants, Freund's incomplete; Flt3-ligand for enhancing immune response of vaccine against cancer, allergy and infection)

IT **Immunostimulants**
(adjuvants, Freund's; Flt3-ligand for enhancing immune response of vaccine against cancer, allergy and infection)

IT **Immunostimulants**
(adjuvants, ISCOMs; Flt3-ligand for enhancing immune response of vaccine against cancer, allergy and infection)

IT **Immunostimulants**
(adjuvants; Flt3-ligand for enhancing immune response of vaccine against cancer, allergy and infection)

IT **T cell (lymphocyte)**
(cytotoxic; Flt3-ligand for enhancing immune response of vaccine against cancer, allergy and infection)

IT **T cell (lymphocyte)**
(helper cell; Flt3-ligand for enhancing immune response of vaccine against cancer, allergy and infection)

IT 9012-72-0, **Glucan**
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(algal; Flt3-ligand for enhancing **immune** response of vaccine against cancer, allergy and infection)

L188 ANSWER 37 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:465829 CAPLUS
DOCUMENT NUMBER: 137:37673
TITLE: Immune system stimulation with agents stimulating T lymphocytes
INVENTOR(S): Graus, Yvo Maria Franciscus; Smit, Hobbe Friso; Osterhaus, Albertus Dominicus Marcellinus Erasmus; Hageman, Robert Johan Joseph
PATENT ASSIGNEE(S): Nutricia N.V., Neth.
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002047703	A2	20020620	WO 2001-NL896	20011210
WO 2002047703	A3	20020912		
WO 2002047703	C1	20040513		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2002110606	A1	20020815	US 2000-734389		20001211
US 6632459	B2	20031014			
AU 2002025512	A5	20020624	AU 2002-25512		20011210
US 2004097584	A1	20040520	US 2003-612242		20030702
PRIORITY APPLN. INFO.:			US 2000-734389	A	20001211
			WO 2001-NL896	W	20011210

OTHER SOURCE(S): MARPAT 137:37673
ED Entered STN: 21 Jun 2002
AB The present invention relates to a preparation for stimulating or enhancing an immune system comprising one or more agents that stimulate T-lymphocytes vivo. Such a preparation can be used in the prophylaxis and/or treatment of a medical condition. The invention further relates to a preparation for use in a pharmaceutical or food product and to a preparation for medical use. Example stimulants include ascorbic acid, N-acetylcysteine, chlorogenic acid and derivs., and plant exts.
IC ICM A61K035-78
ICS A61P037-04
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 15, 17
IT **Immunostimulants**
(adjuvants; immune system stimulation with agents stimulating T lymphocytes)
IT Acanthopanax senticosus
Achyrocline satureioides
Aconitum officinalis
Angelica acutiloba
Anti-infective agents
Antibacterial agents
Antioxidants
Antitumor agents
Antiviral agents
Aristolochia officinalis
Arnica montana
Asteraceae
Astragalus gummifer
Astragalus membranaceus
Astragalus penduliflorus
Avena sativa
Bambusa vulgaris
Baptisia tinctoria
Betula
Beverages
Bryonia dioica
Butia capitata
Calendula officinalis
Carthamus tinctorius
Crataegus
Cynanchum vincetoxicum
Cynara scolymus
Echinacea
Echinacea angustifolia
Echinacea pallida
Echinacea purpurea
Eupatorium cannabinum
Flammulina velutipes
Food
Immunostimulants
Larix occidentalis
Matricaria recutita
Panax pseudoginseng

Parasiticides
Paullinia cupana
Petasites
Phoenix
Plantago
Sambucus
Silene vulgaris
T cell (lymphocyte)
Taraxacum officinale
Thuja occidentalis
Triticum aestivum
Vaccines
Viscum album
(immune system stimulation with agents stimulating **T** lymphocytes)

IT 7440-66-6, Zinc, biological studies 9041-22-9, β- **Glucan**
RL: MOA (Modifier or additive use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**immune** system stimulation with agents stimulating T lymphocytes)

L188 ANSWER 38 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:248195 CAPLUS
DOCUMENT NUMBER: 135:70891
TITLE: Immunostimulant oxidized β-glucan conjugates
AUTHOR(S): Cross, G. G.; Jennings, H. J.; Whitfield, D. M.; Penney, C. L.; Zacharie, B.; Gagnon, L.
CORPORATE SOURCE: National Research Council, Ottawa, ON, K1A 0R6, Can.
SOURCE: International Immunopharmacology (2001), 1(3), 539-550
CODEN: IINMBA; ISSN: 1567-5769
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 08 Apr 2001
AB β-Glucans are polysaccharides that act as nonspecific immune system stimulants. However, many β-Glucans are sparingly soluble in water. This work describes an oxidative procedure, which solubilizes the β-glucan from Saccharomyces cerevisiae and maintains its immunostimulatory properties. Furthermore, the carboxylates at the site of oxidation allow for the conjugation of small mol. immunostimulants. Both the parent oxidized β-glucan and its conjugates with O-β-alanyl-5-[6-(N,N'-dimethylamino)purin-9-yl]pentanol stimulate cytotoxic T-lymphocytes (CTLs), B cells and macrophages. In addition, they both stimulate natural killer (NK) cells, a property which the small mol. purine does not possess.
CC 1-7 (Pharmacology)
IT **T cell (lymphocyte)**
(cytotoxic, stimulation; immunostimulant oxidized β-glucan conjugates)
IT **Immunostimulants**
Saccharomyces cerevisiae
(immunostimulant oxidized β-glucan conjugates)
IT Polysaccharides, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(**immunostimulant** oxidized β- **glucan** conjugates)
IT 9041-22-9D, β- **Glucan**, conjugates 194225-61-1D, conjugates with β- **glucans**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)

(**immunostimulant** oxidized β- **glucan** conjugates)
REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L188 ANSWER 39 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:350607 CAPLUS
DOCUMENT NUMBER: 131:14825
TITLE: A method of increasing nucleic acid synthesis with ultrasound
INVENTOR(S): Unger, Evan C.; McCreery, Thomas; Sadewasser, David
PATENT ASSIGNEE(S): ImaRx Pharmaceutical Corp., USA
SOURCE: PCT Int. Appl., 124 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 9925385	A1	19990527	WO 1998-US23843		19981111
W: AU, CA, JP					
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
AU 9913906	A1	19990607	AU 1999-13906		19981111
PRIORITY APPLN. INFO.:			US 1997-971540	A	19971117
			WO 1998-US23843	W	19981111

OTHER SOURCE(S): MARPAT 131:14825
ED Entered STN: 08 Jun 1999
AB The present invention is directed to a method of increasing nucleic acid synthesis in a cell comprising administering to the cell a therapeutically effective amount of ultrasound for a therapeutically effective time such that said administration of said ultrasound results in said increased nucleic acid synthesis. The nucleic acid sequence may comprise an endogenous sequence or an exogenous sequence. In particular, the invention is directed to increasing the expression of stress proteins and repair proteins.
IC ICM A61K048-00
ICS A61H001-00
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 1, 6, 9, 11, 13, 14
IT **T cell (lymphocyte)**
(killer cell; method of increasing nucleic acid synthesis with ultrasound)
IT 50-69-1D, Ribose, polymers containing **50-99-7D**, Glucose, polymers containing 57-09-0, CTAB 57-10-3, Palmitic acid, biological studies 57-11-4, Octadecanoic acid, biological studies 57-48-7D, Fructose, polymers containing 57-88-5, Cholesterol, biological studies 57-88-5D, Cholesterol, derivs. 57-88-5D, Cholesterol, ester and salt 58-73-1, DPH 58-86-6D, Xylose, polymers containing 59-23-4D, Galactose, polymers containing 65-42-9D, Lyxose, polymers containing 87-79-6D, Sorbose, polymers containing 112-80-1, 9-Octadecenoic acid (9Z)-, biological studies 114-04-5D, Neuraminic acid, polymers containing 124-30-1, Stearylamine 147-81-9D, Arabinose, polymers containing 506-32-1, Arachidonic acid 526-95-4D, Gluconic acid, polymers containing 685-73-4D, Galacturonic acid, polymers containing 926-63-6 1122-58-3, DMAP 1256-86-6, Cholesterol sulfate **1398-61-4**, Chitin **1398-61-4D**, Chitin, derivative 1510-21-0, Cholesterol hemisuccinate 1758-51-6D, Erythrose, polymers containing 2152-76-3D, Idose, polymers containing 2390-68-3, DDAB 2462-63-7,

DOPE 2644-64-6, Dipalmitoylphosphatidylcholine 3416-24-8D, Glucosamine, polymers containing 3458-28-4D, Mannose, polymers containing 3700-67-2, Dimethyldioctadecylammonium bromide 4235-95-4, DOPC 4345-03-3 4458-31-5 4539-70-2, Distearoylphosphatidylcholine 5556-48-9D, Ribulose, polymers containing 5962-29-8D, Xylulose, polymers containing 5987-68-8D, Altrose, polymers containing 6038-51-3D, Allose, polymers containing 6556-12-3D, Glucuronic acid, polymers containing 6561-76-8, DCPE 6814-36-4D, Mannuronic acid, polymers containing 7439-95-4, Magnesium, biological studies 7440-66-6, Zinc, biological studies 7440-70-2, Calcium, biological studies 7535-00-4D, Galactosamine, polymers containing 9000-07-1, Carrageenan 9000-69-5, Pectin 9002-88-4D, Polyethylene, derivs. 9002-89-5D, Polyvinyl alcohol, derivs. 9003-07-0D, Polypropylene, derivs. 9003-39-8, Polyvinylpyrrolidone 9003-39-8D, Polyvinylpyrrolidone, derivative 9004-32-4 9004-34-6, Cellulose, biological studies 9004-54-0, Dextran, biological studies 9004-61-9, Hyaluronic acid 9004-61-9D, Hyaluronic acid, derivative 9004-65-3, Hydroxypropyl methylcellulose 9005-32-7, Alginic acid 9005-79-2, Glycogen, biological studies 9005-82-7, Amylose 9007-27-6, Chondroitin 9012-36-6, Agarose 9012-72-0D, **Glucan**, derivs. 9013-95-0, Levan 9014-63-5D, Xylan, derivs. 9036-88-8D, Mannan, derivs. 9037-22-3, Amylopectin 9037-55-2D, Galactan, derivs. 9037-90-5D, Fructan, derivs. 9046-38-2D, Galacturonan, derivs. 9046-40-6, Pectic acid 9057-02-7, Pullulan 9060-75-7D, Arabinan, derivs. 9072-19-9, Fucoidan 15769-56-9D, Guluronic acid, polymers containing 17598-81-1D, Tagatose, polymers containing 18656-38-7, Dimyristoylphosphatidylcholine 18656-40-1, Dilauroylphosphatidylcholine 19163-87-2D, Gulose, polymers containing 19600-01-2, Ganglioside GM2 19698-29-4, Dipalmitoylphosphatidic acid 20064-29-3 20255-95-2, DMPE 23140-52-5D, Psicose, polymers containing 24305-42-8 24529-88-2 25322-68-3D, Polyethylene glycol, alcs. 25322-68-3D, Polyethylene glycol, derivative 25322-68-3D, derivs. 25525-21-7D, Glucaric acid, polymers containing 29884-64-8D, Threose, polymers containing 30077-17-9D, Talose, polymers containing 37331-28-5, Pustulan 37758-47-7, Ganglioside GM1 40031-31-0D, Erythrulose, polymers containing 60495-58-1, Galactocarolose 64612-25-5D, Fucan, derivs. 67896-63-3, Dipentadecanoylphosphatidylcholine 68354-92-7 68354-99-4 68737-67-7, Dioleoylphosphatidylcholine 69992-87-6, Keratan 73294-85-6 75634-40-1, Dermatan 76822-97-4 78543-25-6 83554-62-5 106392-12-5, Pluronic 106392-12-5D, Pluronic, acid and alc. derivs. 108032-13-9 115534-33-3, TMADPH 124050-77-7, Transfectam 124076-29-5 127512-30-5 128835-92-7, Lipofectin 137056-72-5, DC-Chol 144189-73-1, DOTAP 145035-97-8, Dipalmitoylphosphatidylethanolamine-PEG 145310-87-8, Transfectace 153312-64-2, DMRIE 158571-62-1, Lipofectamine 161293-59-0 161441-83-4 165467-64-1, DOHME 168479-03-6, DOSPA 182919-20-6 183283-19-4, EDMPC 186198-32-3 199171-54-5, DLRIE 201491-17-0, Cytofectin 214206-92-5 214206-94-7 225940-35-2 225940-36-3 225940-37-4 225940-38-5 225940-42-1 225940-43-2

RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(carrier; method of increasing nucleic acid synthesis with ultrasound)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L188 ANSWER 40 OF 63 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:645530 CAPLUS
DOCUMENT NUMBER: 121:245530
TITLE: Immunorestorative effect of glucan immunomodulator on

guinea pigs with experimental ascariosis
AUTHOR(S): Soltys, J.; Benkova, M.; Boroskova, Z.
CORPORATE SOURCE: Parasitological Inst., SAS, Kosice, 040 01, Slovakia
SOURCE: Veterinary Immunology and Immunopathology (1994), 42(3-4), 379-88
CODEN: VIIMDS; ISSN: 0165-2427
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 26 Nov 1994
AB The immunorestorative effect of glucan immunomodulator, combined with porcine Ig and zinc (GI) on T- and B-lymphocytes and peritoneal macrophage phagocytic ability was studied in guinea pigs with exptl. ascariosis (Ascaris suum) after a cyclophosphamide (CY)-evoked immunosuppression. During the migration phase of A. suum infection GI exerted a significant restorative effect on the CY-reduced percentage occurrence of T- and B-cell populations in the mesenteric, mediastinal and hepatic lymph nodes and spleen of A. suum hosts. On the contrary, it did not influence the CY-suppressed phagocytic activity and index of phagocytic activity of the peritoneal macrophages. The protective effect of the GI evaluated by the reduction in the number of migrating ascarid larvae in the lungs of guinea pigs after immunosuppression with CY and administration of GIZ was 14.46% higher, compared with the suppressed and infected group without administration of GI.
CC 1-7 (Pharmacology)
IT **Immunoglobulins**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(combination with zinc and **glucan immunomodulator**; **immunorestorative** effect of **glucan immunomodulator** on guinea pigs with exptl. ascariosis)
IT **Immunostimulants**
(immunorestorative effect of glucan immunomodulator on guinea pigs with exptl. ascariosis)
IT **Lymphocyte**
(**T**-cell, immunorestorative effect of glucan immunomodulator on guinea pigs with exptl. ascariosis)
IT 7440-66-6, Zinc, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(combination with porcine **Ig** and **glucan immunomodulator**; **immunorestorative** effect of **glucan immunomodulator** on guinea pigs with exptl. ascariosis)
IT 9012-72-0, D-**Glucan**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**immunorestorative** effect of **glucan immunomodulator** on guinea pigs with exptl. ascariosis)

L188 ANSWER 41 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 1
ACCESSION NUMBER: 2003:348988 BIOSIS
DOCUMENT NUMBER: PREV200300348988
TITLE: **Immunopotentiation** of intraepithelial lymphocytes

in the intestine by oral administrations of **beta-glucan.**

AUTHOR(S): Tsukada, Chika; Yokoyama, Hisashi; Miyaji, Chikako; Ishimoto, Yuiko; Kawamura, Hiroki; Abo, Toru [Reprint Author]

CORPORATE SOURCE: Department of Immunology, Niigata University School of Medicine, Niigata, 951-8510, Japan
immunol2@med.niigata-u.ac.jp

SOURCE: Cellular Immunology, (January 2003) Vol. 221, No. 1, pp. 1-5. print.
CODEN: CLIMB8. ISSN: 0008-8749.

DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 30 Jul 2003
Last Updated on STN: 30 Jul 2003

ABSTRACT:Mice were orally administered with **beta-glucan**, isolated from baker's yeast, daily for one week (25 mg/day/mouse) and several immunoparameters in the digestive tract were examined. The most prominent change was an increase in the number of intraepithelial lymphocytes (IEL) in the intestine, although the number of lymphocytes in the liver remained unchanged. The absolute number of both alphabetaT cells and gammadeltaT cells expressing CD8 antigens increased among IEL in the intestine. Primarily, liver lymphocytes showed a spontaneous production of Type 0 cytokine (simultaneous production of IFNgamma and IL-4) while IEL did not produce any cytokines without stimulation. However, mice administered with **beta-***glucan*** produced Type 1 cytokine, namely, production of IFNgamma alone. These results suggest that **beta-glucan** may be an important potentiator for mucosal immunity in the digestive tract.

CONCEPT CODE:
Cytology - General 02502
Cytology - Plant 02504
Cytology - Animal 02506
Biochemistry studies - Proteins, peptides and amino acids 10064
Pathology - Therapy 12512
Digestive system - Physiology and biochemistry 14004
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
Endocrine - General 17002
Pharmacology - General 22002
Pharmacology - Immunological processes and allergy 22018
Immunology - General and methods 34502

INDEX TERMS: Major Concepts
Cell Biology; Digestive System (Ingestion and Assimilation); Immune System (Chemical Coordination and Homeostasis); Pharmacology

INDEX TERMS: Parts, Structures, & Systems of Organisms
alpha-beta **T cell**: blood and lymphatics, immune system; digestive tract: digestive system; gamma-delta **T cell**: blood and lymphatics, immune system; intestine: digestive system; intraepithelial lymphocyte: blood and lymphatics, immune system; liver: digestive system

INDEX TERMS: Chemicals & Biochemicals
CD8: antigen; IFN-gamma [interferon-gamma]: cytokine; IL-4 [interleukin-4]: cytokine; **beta-glucan**: immunologic-drug, oral administration

INDEX TERMS: Miscellaneous Descriptors
immunopotentiation; mucosal immunity

ORGANISM: Classifier
Ascomycetes 15100

Searched by Barb O'Bryen, STIC 2-2518

Super Taxa
Fungi; Plantae
Organism Name
baker's yeast (common)
Taxa Notes
Fungi, Microorganisms, Nonvascular Plants, Plants
ORGANISM: Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
mouse (common): strain-C57BL/6
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates
REGISTRY NUMBER: 9041-22-9 (**beta-glucan**)

L188 ANSWER 42 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 4
ACCESSION NUMBER: 1999:510610 BIOSIS
DOCUMENT NUMBER: PREV199900510610
TITLE: Enhancement of cytotoxic **T lymphocyte** activity by gel-forming (1fwdarw3)-**beta**-D-**glucan**, SSG.
AUTHOR(S): Adachi, Y.; Ishikawa, M.; Ohno, N.; Yadomae, T. [Reprint author]
CORPORATE SOURCE: Laboratory of Immunopharmacology of Microbial Products, Tokyo University of Pharmacy and Life Science, 1432-1 Horinouchi, Hachioji, Tokyo, 192-0392, Japan
SOURCE: Pharmaceutical and Pharmacological Letters, (July, 1999) Vol. 9, No. 1, pp. 14-17. print.
ISSN: 0939-9488.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 3 Dec 1999
Last Updated on STN: 3 Dec 1999

ABSTRACT:The effect of the (1 fwdarw 3)-**beta**-D-**glucan**, SSG, on generation of alloreactive cytotoxic **T lymphocytes** (CTL) in a primary murine mixed lymphocyte reaction (MLR) was examined. Cytotoxic activity induced by SSG is dependent on concentration of SSG and is restricted to allogenic antigen. To determine molecular mechanism of cytotoxicity induced by SSG, expression of cell-surface molecules and production of cytokines were examined. SSG augmented expression of IL-12 and IL-15, which might enhance CTL activity and strengthen cellular immunity. Since induction of IFN-gamma in supernatant was dependent on concentration of SSG in MLR, it was suggested that IFN-gamma may stimulate macrophages to enhance expression of adhesion molecules. These results suggested that induction of antigen specific CTL in the presence of SSG was mediated by production of IL-12 and IL-15 or expressions of ICAM-1, **B7**-1 and **B7**-2 via augmentation of INF-gamma production.

CONCEPT CODE: Immunology - General and methods 34502
Biochemistry studies - General 10060
Biophysics - General 10502
Endocrine - General 17002
Pharmacology - General 22002
INDEX TERMS: Major Concepts
Immune System (Chemical Coordination and Homeostasis); Pharmacology
INDEX TERMS: Parts, Structures, & Systems of Organisms
cytotoxic **T lymphocytes**: blood and

Searched by Barb O'Bryen, STIC 2-2518

lymphatics, immune system
INDEX TERMS: Chemicals & Biochemicals
(1-3)-**beta**-D-**glucan** [SSG]; allogenic antigen; **B7**-1; **B7**-2; ICAM-1 [intercellular adhesion molecule-1]; IFN-gamma [interferon-gamma]; IL-12 [interleukin-12]; IL-15 [interleukin-15]
INDEX TERMS: Miscellaneous Descriptors
cellular immunity; mixed lymphocyte reaction
ORGANISM: Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
murine
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates
REGISTRY NUMBER: **9051-97-2** ((1-3)-**beta**-D-**glucan**
)
9051-97-2 (SSG)

L188 ANSWER 43 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 5
ACCESSION NUMBER: 1996:126183 BIOSIS
DOCUMENT NUMBER: PREV199698698318
TITLE: Pulmonary metastases neutralization and tumor rejection by in vivo administration of **beta glucan** and bispecific antibody.
AUTHOR(S): Penna, Christophe; Dean, Phillip A.; Nelson, Heidi [Reprint author]
CORPORATE SOURCE: Dep. Surg., Mayo Clinic, 200 First St. S.W., Rochester, MN 55905, USA
SOURCE: International Journal of Cancer, (1996) Vol. 65, No. 3, pp. 377-382.
CODEN: IJCNAW. ISSN: 0020-7136.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 27 Mar 1996
Last Updated on STN: 27 Mar 1996
ABSTRACT:Bispecific antibody (BsAb) with specificity for tumor cell surface antigen and the CD3 molecule on **T cells** can redirect activated **T cells** to lyse tumor cells. Since the ex vivo expansion and activation of **T cells** is impractical and ineffective for treating established tumors, we tested whether the ***immune*** **stimulant beta glucan** could in situ-activate **T cells**, which could secondarily be retargeted with BsAbs to lyse tumor cells. To test for tumor neutralization, C3H/HeN mice were injected i.v. with CI-62 melanoma cells and immediately treated with i.p. **beta glucan** and/or anti-CD3 (500A2) times anti-p97 (96.5) F(ab')-2 BsAb i.v. Pulmonary metastases were counted 14 days later. To test for tumor rejection and survival in a solid tumor model, mice were injected s.c. and i.p. with CI-62 cells and 7 days later administered ***beta*** **glucan** i.p. and/or F(ab')-2 BsAb i.v. In the neutralization model, there was a significant reduction in the number of metastases in the **beta glucan** + BsAb group, as compared with controls, and with **beta glucan** alone. In the established tumor model, **beta glucan** + BsAb reduced the incidence of s.c. tumors as compared with control, with BsAb alone and with ***beta*** **glucan** alone. It also prolonged survival of

tumor-bearing mice compared with control, BsAb alone and **beta** ***glucan*** alone. We conclude that **T cells** can be activated in vivo by glucan and retargeted with F(ab')-2 BsAb.

CONCEPT CODE: Cytology - Animal 02506
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Carbohydrates 10068
Pathology - Therapy 12512
Metabolism - Carbohydrates 13004
Metabolism - Proteins, peptides and amino acids 13012
Blood - Blood cell studies 15004
Blood - Lymphatic tissue and reticuloendothelial system 15008
Respiratory system - Pathology 16006
Integumentary system - Pathology 18506
Pharmacology - Clinical pharmacology 22005
Neoplasms - Immunology 24003
Neoplasms - Pathology, clinical aspects and systemic effects 24004
Neoplasms - Biochemistry 24006
Neoplasms - Therapeutic agents and therapy 24008
Immunology - Immunopathology, tissue immunology 34508

INDEX TERMS: Major Concepts
Blood and Lymphatics (Transport and Circulation); Cell Biology; Immune System (Chemical Coordination and Homeostasis); Integumentary System (Chemical Coordination and Homeostasis); Metabolism; Respiratory System (Respiration); Tumor Biology

INDEX TERMS: Chemicals & Biochemicals
BETA GLUCAN

INDEX TERMS: Miscellaneous Descriptors
ACTIVATED **T CELL**; MELANOMA CELL; POTENTIAL THERAPY; SURVIVAL; TARGETING; TUMOR CELL LYSIS

ORGANISM: Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
mouse
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

REGISTRY NUMBER: 9041-22-9 (**BETA GLUCAN**)

L188 ANSWER 44 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2005:119500 BIOSIS
DOCUMENT NUMBER: PREV200500117957
TITLE: Short- and long-term effects of a dietary yeast **beta-glucan** (Macrogard) and alginic acid (Ergosan) preparation on **immune response** in sea bass (Dicentrarchus labrax).
AUTHOR(S): Bagni, M.; Romano, N.; Finoia, M. G.; Abelli, L.; Scapighati, G.; Tiscar, P. G.; Sarti, M.; Marino, G. [Reprint Author]
CORPORATE SOURCE: Dept AquacultureInst Res Appl Sea, ICRAM, Via Casalotti 300, I-00166, Rome, Italy
g.marino@icram.org
SOURCE: Fish & Shellfish Immunology, (April 2005) Vol. 18, No. 4, pp. 311-325. print.

Searched by Barb O'Bryen, STIC 2-2518

ISSN: 1050-4648.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 23 Mar 2005
Last Updated on STN: 23 Mar 2005

ABSTRACT:The present study investigated the **immunomodulatory** activity of Ergosan, an algal extract containing alginic acid, and Macrogard, a yeast extract containing **beta-glucans**, on innate and specific immunity in sea bass (Dicentrarchus labrax). Four cycles of experimental feeding using normal fish feed formulation (control group) supplemented with Ergosan (0.5%) or Macrogard (0.1%) were performed at 60-day intervals (15 days of treatment + 45 days of suspension). Serum complement, lysozyme, total proteins and heat shock protein (HSP) concentrations were measured at 15, 30 and 45 days from the end of the first 15-day feeding cycle (short term) and 45 days after the end of each feeding cycle over a 35-week period (long term). The percentage of B- and **T-lymphocytes** in peripheral blood leucocytes and gut were measured over long-term trial. Significant elevation ($P < 0.05$) in serum complement activity occurred in sea bass fed with alginic acid and glucans, at 15 days from the end of first cycle of treatment. Significant elevation ($P < 0.05$) in serum lysozyme, gill and liver HSP concentration were observed in the same experimental groups at 30 days from the end of treatment, whereas a significant increase ($P < 0.05$) of complement activity was only observed in fish that received an Ergosan diet. At 45 days from the end of treatment, complement, lysozyme and HSP concentration did not differ among groups. Over the long-term period, no significant differences were observed in innate and specific immune parameters, survival, growth performances and conversion index in treated and control fish. A dramatic decrease of both innate and acquired immune parameters was observed during the winter season in all groups, followed by a partial recovery when water temperature increased. Reduction in complement and lysozyme activities was significatively correlated ($P < 0.01$) to water temperature variation. The results suggested the potential of alginic acid and **beta-** ***glucans*** to activate some innate immune responses in sea bass, and particularly under conditions of immunodepression related to environmental stress.

CONCEPT CODE: Cytology - Animal 02506
Ecology: environmental biology - Animal 07508
Ecology: environmental biology - Oceanography 07512
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Carbohydrates 10068
Enzymes - General and comparative studies: coenzymes 10802
Food technology - General and methods 13502
Digestive system - Physiology and biochemistry 14004
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
Respiratory system - Physiology and biochemistry 16004
Pharmacology - Immunological processes and allergy 22018
Immunology - General and methods 34502

INDEX TERMS: Major Concepts
Digestive System (Ingestion and Assimilation); Foods; Immune System (Chemical Coordination and Homeostasis); Marine Ecology (Ecology, Environmental Sciences)

INDEX TERMS: Parts, Structures, & Systems of Organisms
B lymphocyte: blood and lymphatics, immune system; **T lymphocyte**: blood and lymphatics, immune system; gill: respiratory system; gut: digestive system; leukocyte: blood and lymphatics, immune system; liver: digestive system

Searched by Barb O'Bryen, STIC 2-2518

INDEX TERMS: Chemicals & Biochemicals
alginic acid [Ergosan]; **beta-glucan** [Macrogard]; heat shock protein; **immunostimulants**; lysozyme [EC 3.2.1.17]
INDEX TERMS: Methods & Equipment
experimental feeding cycle: applied and field techniques
INDEX TERMS: Miscellaneous Descriptors
immune response; **immunomodulatory** activity; water temperature; winter
ORGANISM: Classifier
Osteichthyes 85206
Super Taxa
Pisces; Vertebrata; Chordata; Animalia
Organism Name
Dicentrarchus labrax (species) [sea bass (common)]
Taxa Notes
Animals, Chordates, Fish, Nonhuman Vertebrates, Vertebrates
REGISTRY NUMBER: 9005-32-7 (alginic acid)
9005-32-7 (Ergosan)
9041-22-9 (**beta-glucan**)
53238-80-5 (**beta-glucan**)
9041-22-9 (Macrogard)
53238-80-5 (Macrogard)
9001-63-2 (lysozyme)
9001-63-2 (EC 3.2.1.17)

L188 ANSWER 45 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:12478 BIOSIS
DOCUMENT NUMBER: PREV200400016678
TITLE: Vaccine adjuvants: Role and mechanisms of action in vaccine immunogenicity.
AUTHOR(S): Marciani, Dante J. [Reprint Author]
CORPORATE SOURCE: Galenica Pharmaceuticals, Inc., 2800 Milan Court, Suite 118, Birmingham, AL, 35211, USA
marciani.gpi@att.net
SOURCE: Drug Discovery Today, (15 October 2003) Vol. 8, No. 20, pp. 934-943. print.
ISSN: 1359-6446 (ISSN print).
DOCUMENT TYPE: Article
General Review; (Literature Review)
LANGUAGE: English
ENTRY DATE: Entered STN: 24 Dec 2003
Last Updated on STN: 24 Dec 2003
ABSTRACT: Inactivated vaccines require adjuvants to stimulate an **immune** ***response.*** The choice of adjuvant or immune enhancer determines whether the **immune response** is effective, ineffective or damaging. Accordingly, there is a need for new adjuvants that stimulate the appropriate immunity, for example, **T cell** immunity for intracellular pathogens and cancer vaccines. In several adjuvants, the identification of chemical groups that interact with specific cell toll-like receptors (innate immunity) or receptors for **costimulatory** ligands (adaptive immunity), has enabled the establishment of structure-function relationships that are useful in the design of new adjuvants. Because of the crucial ***immunomodulating*** role of adjuvants, sub-unit vaccine development will remain dependent on new adjuvants.
CONCEPT CODE: Cytology - Animal 02506
Biochemistry studies - General 10060

Biochemistry studies - Lipids 10066
Biochemistry studies - Carbohydrates 10068
Pathology - Therapy 12512
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
Pharmacology - General 22002
Immunology - General and methods 34502

INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics; Immune System (Chemical Coordination and Homeostasis); Pharmaceuticals (Pharmacology)

INDEX TERMS: Parts, Structures, & Systems of Organisms
T cells: blood and lymphatics, immune system

INDEX TERMS: Chemicals & Biochemicals
Toll-like receptors; alpha-galactosylceramide: vaccine adjuvant; bacterial CpG-DNA: vaccine adjuvant; **beta-glucans**: vaccine adjuvant; cancer vaccines: vaccine; **co-stimulatory** ligands: vaccine adjuvant; imidazoquinolines: vaccine adjuvant; lipopolysaccharide [endotoxin]: vaccine adjuvant; small synthetic compounds: vaccine adjuvant; vaccine adjuvants: classification, mechanisms of action, vaccine component, pharmaceutical

INDEX TERMS: Miscellaneous Descriptors
T cell immunity; adaptive immunity; **immune response** stimulation; innate immunity; intracellular pathogens; structure-function relationships; vaccine development; vaccine immunogenicity

ORGANISM: Classifier
Vertebrata 85150
Super Taxa
Chordata; Animalia
Organism Name
vertebrate (common)
Taxa Notes
Animals, Chordates, Nonhuman Vertebrates, Vertebrates

REGISTRY NUMBER: 209533-83-5 (alpha-galactosylceramide)
9041-22-9 (**beta-glucans**)

L188 ANSWER 46 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2004:144156 BIOSIS
DOCUMENT NUMBER: PREV200400144017
TITLE: **Immunopotentiating** properties of lentinan (1 fwdarw 3)-**beta**-D-**glucan** extracted from culinary-medicinal Shiitake mushroom Lentinus edodes (Berk.) Singer (Agaricomycetideae).
AUTHOR(S): Yap, Ann-Teck; Ng, Mah-Lee [Reprint Author]
CORPORATE SOURCE: Department of Microbiology, National University of Singapore, 5 Science Drive 2, Singapore, 117597, Singapore micngml@nus.edu.sg
SOURCE: International Journal of Medicinal Mushrooms, (2003) Vol. 5, No. 4, pp. 339-358. print.
ISSN: 1521-9437 (ISSN print).
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 10 Mar 2004
Last Updated on STN: 10 Mar 2004

Searched by Barb O'Bryen, STIC 2-2518

ABSTRACT:The **immunopotentiating** efficacy of lentinan, a fully purified (1fwdarw3)-**beta**-D-**glucan** extracted from culinary-medicinal mushroom Lentinus edodes (Berk.) Singer was investigated both in vitro and in vivo. The oral administration of lentinan to AKR mice exerted strong antitumor activity, resulting in raised levels of lymphocytokines such as IFN-gamma, TNF-alpha, IL-2, and IL-1alpha. Tissue cultures of murine macrophages CRL-2019, B-lymphocytes HB-284, and **T-***lymphocytes***** CRL-8179, which were treated with lentinan, showed high levels of activation using flow cytometry. Activated immunocytes, particularly the T-helper cells by lentinan, might render the physiological constitutions of the host highly cancer and infection resistant. Adoptive immunotherapy of the immunodeficient mice such as the nude (athymic) mice, B-cell deficient mice, and SCID (severe combined immunodeficient) mice via the transfer of the lentinan-activated immunocytes resulted in the inhibition of tumor growth. Lentinan appeared to represent a unique class of host defense potentiators (HDP), protecting the hosts from the side effects of conventional therapeutic measures and improving various kinds of immunological parameters with no toxic side-effects in animal models.

CONCEPT CODE:
Cytology - Animal 02506
Biochemistry studies - General 10060
Biochemistry studies - Proteins, peptides and amino acids 10064
Pathology - Therapy 12512
Food technology - General and methods 13502
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
Endocrine - General 17002
Pharmacology - Immunological processes and allergy 22018
Immunology - General and methods 34502
Plant physiology - Chemical constituents 51522
Pharmacognosy and pharmaceutical botany 54000

INDEX TERMS:
Major Concepts
Biochemistry and Molecular Biophysics; Foods; Immune System (Chemical Coordination and Homeostasis); Pharmacognosy (Pharmacology)

INDEX TERMS:
Parts, Structures, & Systems of Organisms
B-lymphocytes: blood and lymphatics, immune system; **T-lymphocytes**: blood and lymphatics, immune system; macrophages: blood and lymphatics, immune system

INDEX TERMS:
Chemicals & Biochemicals
IFN-gamma [interferon-gamma]; IL-1-alpha [interleukin-1-alpha]; IL-2 [interleukin-2]; TNF-alpha [tumor necrosis factor-alpha]; lentinan-(1-3)-**beta**-D-**glucan**: immunologic-drug, extraction, **immunopotentiating** properties

INDEX TERMS:
Methods & Equipment
flow cytometry: histology and cytology techniques, laboratory techniques

INDEX TERMS:
Miscellaneous Descriptors
immunological parameters

ORGANISM:
Classifier
Basidiomycetes 15300
Super Taxa
Fungi; Plantae
Organism Name
Lentinus edodes (species) [shiitake mushroom (common)]: culinary mushroom, medicinal mushroom
Taxa Notes
Fungi, Microorganisms, Nonvascular Plants, Plants

Searched by Barb O'Bryen, STIC 2-2518

ORGANISM: Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
mouse (common)
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

L188 ANSWER 47 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2002:175191 BIOSIS
DOCUMENT NUMBER: PREV200200175191
TITLE: Immunization strategies to augment oral vaccination with DNA and viral vectors expressing HIV envelope glycoprotein.
AUTHOR(S): Wierzbicki, Andrzej; Kiszka, Irena; Kaneko, Hiroshi; Kmieciak, Dariusz; Wasik, Thomas J.; Gzyl, Jaroslaw; Kaneko, Yutaro; Kozbor, Danuta [Reprint author]
CORPORATE SOURCE: Center for Neurovirology and Cancer Biology, Temple University, 1900 North 12th Street, Philadelphia, PA, 19122, USA
dkozbor@astro.temple.edu
SOURCE: Vaccine, (31 January, 2002) Vol. 20, No. 9-10, pp. 1295-1307. print.
CODEN: VACCDE. ISSN: 0264-410X.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 6 Mar 2002
Last Updated on STN: 6 Mar 2002
ABSTRACT:Induction of mucosal immunity to the human immunodeficiency virus (HIV) envelope (env; gp160) glycoprotein has been demonstrated with orally administered recombinant vaccinia virus (rVV) vectors and poly(DL-lactide-co-glycolide) (PLG)-encapsulated plasmid DNA expressing gp160. In this study, we investigated the effect of an oral DNA-prime/rVV-boost vaccine regimen in conjunction with adjuvants on the level of gp160-specific cellular and humoral responses in BALB/c mice. We demonstrated that DNA priming followed by a booster with rVV expressing gp160 (vPE16) significantly augmented env-specific immunity in systemic and mucosal tissues of the immunized mice. Association of vPE16 with liposomes and coadministration of liposome-associated **beta-glucan** lentinan or IL-2/Ig-encoded plasmid DNA-encapsulated in PLG microparticles triggered the optimal cell-mediated immune (CMI) responses. Lentinan was found to increase env-specific type 1 cytokine production and cytotoxic **T-lymphocyte** (CTL) activities but had no effect on humoral responses. On the other hand, IL-2/Ig-mediated increases in both type 1 and 2 activities were associated with higher levels of env-specific CTL and antibody responses. Results of these studies demonstrated the effectiveness of oral vaccines with DNA and rVV vectors in conjunction with ***immunomodulators*** in inducing specific immune responses in systemic and mucosal tissues.
CONCEPT CODE: Cytology - Animal 02506
Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
Biochemistry studies - Proteins, peptides and amino acids 10064
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
Endocrine - General 17002
Immunology - General and methods 34502
INDEX TERMS: Major Concepts

Immune System (Chemical Coordination and Homeostasis)
INDEX TERMS: Parts, Structures, & Systems of Organisms
cytotoxic **T-lymphocyte**: blood and lymphatics, immune system
INDEX TERMS: Chemicals & Biochemicals
IL-2 [interleukin-2]; glycoprotein 160; human immunodeficiency virus envelope glycoprotein; **immunomodulators**; lentinan; plasmid DNA
INDEX TERMS: Methods & Equipment
oral vaccination: prophylactic method
INDEX TERMS: Miscellaneous Descriptors
cell-mediated **immune response**; humoral response; immune responses; mucosal immunity
ORGANISM: Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
mouse
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates
REGISTRY NUMBER: 37339-90-5 (lentinan)

L188 ANSWER 48 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2002:402334 BIOSIS
DOCUMENT NUMBER: PREV200200402334
TITLE: Purification, characterization, and modification of **T lymphocyte**-stimulating polysaccharide from spores of Ganoderma lucidum.
AUTHOR(S): Bao, Xing-Feng; Zhen, Yun; Ruan, Li; Fang, Ji-nian [Reprint author]
CORPORATE SOURCE: Shanghai Institute of Materia Medica, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences, 294 Taiyuan Road, Shanghai, 200031, China
jnfang@mail.shcnc.ac.cn
SOURCE: Chemical and Pharmaceutical Bulletin (Tokyo), (May, 2002) Vol. 50, No. 5, pp. 623-629. print.
CODEN: CPBTAL. ISSN: 0009-2363.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 24 Jul 2002
Last Updated on STN: 24 Jul 2002
ABSTRACT:The hot-water extract of the spores of Ganoderma lucidum was shown to have a stimulating effect on concanavalin A-induced mitogenic activity of ***T*** **lymphocytes.** Bioassay-guided separation led to the isolation of a polysaccharide with potent **T lymphocyte** -stimulating activity by ethanol fractionation, anion-exchange, and size-exclusion chromatography. Based on the composition and methylation analyses, periodate oxidation, Smith degradation, and NMR spectroscopy, the native polysaccharide was shown to be a **beta**-D-(1fwdarw3)-***glucan*** with branches of terminal glucosyl residues substituted at C-6 of the **glucose** residues in the main chain. The branching ratio is approximately 20%. A series of sulfated or carboxymethylated derivatives were prepared and their structural features were elucidated by chemical and spectral analyses. The solution conformation and **T lymphocyte** proliferation effect of the glucans before and after derivatization were compared and discussed. The data obtained indicate that the introduction of ionic groups would significantly affect the original conformation of the native

glucan in aqueous solution and further affect **T lymphocyte** -stimulating activity. The triple-helical structure of the glucans, the nature of the ionic groups, and the density of negative charge were considered to be closely related to this activity.

CONCEPT CODE: Cytology - Animal 02506
Pathology - Therapy 12512
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
Pharmacology - Immunological processes and allergy 22018
Immunology - General and methods 34502
Pharmacognosy and pharmaceutical botany 54000

INDEX TERMS: Major Concepts
Immune System (Chemical Coordination and Homeostasis); Pharmacognosy (Pharmacology)

INDEX TERMS: Parts, Structures, & Systems of Organisms
T lymphocyte: blood and lymphatics, immune system, proliferation; spores

INDEX TERMS: Chemicals & Biochemicals
beta-D-(1-3)-**glucan**: immunologic-drug, **immunostimulant**-drug, carboxymethylated derivatives, characterization, modification, purification, sulfated derivatives

ORGANISM: Classifier
Basidiomycetes 15300
Super Taxa
Fungi; Plantae
Organism Name
Ganoderma lucidum: medicinal plant
Taxa Notes
Fungi, Microorganisms, Nonvascular Plants, Plants

ORGANISM: Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
mouse: animal model
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

L188 ANSWER 49 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2003:49690 BIOSIS
DOCUMENT NUMBER: PREV200300049690
TITLE: Medicinal mushrooms as a source of antitumor and **immunomodulating** polysaccharides.
AUTHOR(S): Wasser, S. P. [Reprint Author]
CORPORATE SOURCE: Institute of Evolution, University of Haifa, Mt. Carmel, Haifa, 31905, Israel
spwasser@research.haifa.ac.il
SOURCE: Applied Microbiology and Biotechnology, (November 2002) Vol. 60, No. 3, pp. 258-274. print.
CODEN: AMBIDG. ISSN: 0175-7598.
DOCUMENT TYPE: Article
General Review; (Literature Review)
LANGUAGE: English
ENTRY DATE: Entered STN: 15 Jan 2003
Last Updated on STN: 15 Jan 2003

ABSTRACT:The number of mushrooms on Earth is estimated at 140,000, yet maybe only 10% (approximately 14,000 named species) are known. Mushrooms comprise a

vast and yet largely untapped source of powerful new pharmaceutical products. In particular, and most importantly for modern medicine, they represent an unlimited source of polysaccharides with antitumor and ***immunostimulating*** properties. Many, if not all, Basidiomycetes mushrooms contain biologically active polysaccharides in fruit bodies, cultured mycelium, culture broth. Data on mushroom polysaccharides have been collected from 651 species and 7 infraspecific taxa from 182 genera of higher Hetero- and Homobasidiomycetes. These polysaccharides are of different chemical composition, with most belonging to the group of **beta-glucans** ; these have **beta**-(1fwdarw3) linkages in the main chain of the ***glucan*** and additional **beta**-(1fwdarw6) branch points that are needed for their antitumor action. High molecular weight glucans appear to be more effective than those of low molecular weight. Chemical modification is often carried out to improve the antitumor activity of polysaccharides and their clinical qualities (mostly water solubility). The main procedures used for chemical improvement are: Smith degradation (oxydo-reducto-hydrolysis), formolysis, and carboxymethylation. Most of the clinical evidence for antitumor activity comes from the commercial polysaccharides lentinan, PSK (krestin), and schizophyllan, but polysaccharides of some other promising medicinal mushroom species also show good results. Their activity is especially beneficial in clinics when used in conjunction with chemotherapy. Mushroom polysaccharides prevent oncogenesis, show direct antitumor activity against various allogeneic and syngeneic tumors, and prevent tumor metastasis. Polysaccharides from mushrooms do not attack cancer cells directly, but produce their antitumor effects by activating different immune responses in the host. The antitumor action of polysaccharides requires an intact **T-** ***cell*** component; their activity is mediated through a thymus-dependent immune mechanism. Practical application is dependent not only on biological properties, but also on biotechnological availability. The present review analyzes the pecularities of polysaccharides derived from fruiting bodies and cultured mycelium (the two main methods of biotechnological production today) in selected examples of medicinal mushrooms.

CONCEPT CODE:
Cytology - Animal 02506
Cytology - Human 02508
Biochemistry studies - General 10060
Biochemistry studies - Carbohydrates 10068
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
Reproductive system - Physiology and biochemistry 16504
Neoplasms - Immunology 24003
Neoplasms - Pathology, clinical aspects and systemic effects 24004
Immunology - General and methods 34502
Immunology - Immunopathology, tissue immunology 34508
Plant physiology - Reproduction 51512
Plant physiology - Chemical constituents 51522
Pharmacognosy and pharmaceutical botany 54000

INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics; Immune System (Chemical Coordination and Homeostasis); Pharmacognosy (Pharmacology); Tumor Biology

INDEX TERMS: Parts, Structures, & Systems of Organisms
T-cells: blood and lymphatics, immune system; cancer cells, inhibition studies; fruit body: reproductive system; macrophages: blood and lymphatics, immune system; mycelium

INDEX TERMS: Chemicals & Biochemicals
glucans: molecular weights; pharmaceutical products: applications, preparation, sources; polysaccharides: analysis, antitumor properties, biological properties,

chemical composition studies, **immunomodulating** properties, isolation, pharmacological properties, sources

INDEX TERMS: Miscellaneous Descriptors
biotechnology; cancer therapeutics; oncogenesis

ORGANISM: Classifier
Animalia 33000
Super Taxa
Animalia
Organism Name
animal (common)
Taxa Notes
Animals

ORGANISM: Classifier
Basidiomycetes 15300
Super Taxa
Fungi; Plantae
Organism Name
basidiomycete (common)
mushroom (common): biochemical constituents, medical
Taxa Notes
Fungi, Microorganisms, Nonvascular Plants, Plants

ORGANISM: Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
human (common)
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

ORGANISM: Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
mouse (common)
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

REGISTRY NUMBER: 9012-72-0 (glucans)

L188 ANSWER 50 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2001:504787 BIOSIS
DOCUMENT NUMBER: PREV200100504787
TITLE: **Immunomodulating** properties of the **chitin** -glucanic preparation in vitro.
AUTHOR(S): Nakonechna, A. [Reprint author]; Drannik, G. [Reprint author]; Gorovoy, L.; Kushko, L. [Reprint author]
CORPORATE SOURCE: Clinical Immunology and Allergology, National Medical University, Kiev, Ukraine
SOURCE: Allergy (Copenhagen), (2001) Vol. 56, No. Supplement 68, pp. 109. print.
Meeting Info.: XXth Congress of the European Academy of Allergology and Clinical Immunology. Berlin, Germany. May 09-13, 2001.
CODEN: LLRGDY. ISSN: 0105-4538.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)

LANGUAGE: English
ENTRY DATE: Entered STN: 31 Oct 2001
Last Updated on STN: 23 Feb 2002
CONCEPT CODE: General biology - Symposia, transactions and proceedings 00520
Cytology - Animal 02506
Cytology - Human 02508
Biochemistry studies - Proteins, peptides and amino acids 10064
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
Immunology - General and methods 34502
INDEX TERMS: Major Concepts
Immune System (Chemical Coordination and Homeostasis)
INDEX TERMS: Parts, Structures, & Systems of Organisms
T lymphocytes: blood and lymphatics, immune system; immune system: immune system; peripheral blood: blood and lymphatics; phagocytes: immune system
INDEX TERMS: Chemicals & Biochemicals
CD19 positive antibodies; CD3 positive antibodies; CD4 positive antibodies; CD8 positive antibodies; **beta**-1,3-**glucan**; **beta**-1,6-**glucan**; **chitin**-glucanic preparation: **immunomodulating** properties; interleukin-1
INDEX TERMS: Miscellaneous Descriptors
Meeting Abstract
ORGANISM: Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
human
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates
REGISTRY NUMBER: **37361-00-5** (**beta**-1,6-**glucan**)

L188 ANSWER 51 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1996:77116 BIOSIS
DOCUMENT NUMBER: PREV199698649251
TITLE: (1 fwdarw 3)-**beta**-D-**glucans** as biological response modifiers: A review of structure-functional activity relationships.
AUTHOR(S): Bohn, John A.; Bemiller, James N. [Reprint author]
CORPORATE SOURCE: Whistler Cent. Carbohydrate Res., 1160 Smith Hall, Purdue Univ., West Lafayette, IN 47907, USA
SOURCE: Carbohydrate Polymers, (1995) Vol. 28, No. 1, pp. 3-14.
CODEN: CAPOD8. ISSN: 0144-8617.
DOCUMENT TYPE: Article
General Review; (Literature Review)
LANGUAGE: English
ENTRY DATE: Entered STN: 27 Feb 1996
Last Updated on STN: 28 Feb 1996
ABSTRACT:(1 fwdarw 3)-**beta**-D-**Glucans** that have B-***beta*** -glucopyranosyl units attached by (1 fwdarw 6) linkages as single unit branches enhance the immune system systemically. This enhancement results in antitumor, antibacterial, antiviral, anticoagulatory and wound healing activities. The (1 fwdarw 3)-**beta**-D-**glucan** backbone is essential. The most active polymers have degrees of branching (DB) between

0.20 and 0.33. Data suggest both that triple helical structures formed from high molecular weight polymers are possibly important for ***immunopotentiating*** activity and that activity is independent of any specific ordered structure. Other data indicate that it is the distribution of the branch units along the backbone chain that is responsible for activity. There are data that indicate both that beta-D-glucopyranosyl units are required for **immunopotentiating** activity and that the specific nature of the substituent is unimportant. There are also data that indicate both that the more water-soluble polymers are more active (up to a certain degree of substitution (DS) or DB) and that some insoluble aggregates are more stimulatory than the soluble polymers. The best conclusion at this time is that the **immunopotentiating** activity of (1 fwdarw 3)-**beta** -D- **glucans** depends on a helical conformation and on the presence of hydrophilic groups located on the outside surface of the helix. ***Immunopotentiation*** effected by binding of a (1 fwdarw 3)-**beta** -**glucan** molecule or particle probably includes activation of cytotoxic macrophages, helper **T cells**, and NK cells, promotion of **T cell** differentiation, and activation of the alternative complement pathway.

CONCEPT CODE:
Cytology - Animal 02506
Biochemistry studies - Carbohydrates 10068
Biophysics - Molecular properties and macromolecules 10506
Anatomy and Histology - Regeneration and transplantation 11107
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
Blood - Lymphatic tissue and reticuloendothelial system 15008
Pharmacology - Blood and hematopoietic agents 22008
Neoplasms - Immunology 24003
Neoplasms - Therapeutic agents and therapy 24008
Development and Embryology - Morphogenesis 25508
Immunology - Immunopathology, tissue immunology 34508
Medical and clinical microbiology - Bacteriology 36002
Medical and clinical microbiology - Virology 36006
Chemotherapy - Antibacterial agents 38504
Chemotherapy - Antiviral agents 38506

INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Cell Biology; Development; Immune System (Chemical Coordination and Homeostasis); Pharmacology; Physiology; Tumor Biology

INDEX TERMS: Chemicals & Biochemicals
(1fwdarw3)-**BETA**-D-**GLUCANS**

INDEX TERMS: Miscellaneous Descriptors
ALTERNATIVE COMPLEMENT PATHWAY ACTIVATION; ANTIBACTERIAL ACTIVITY; ANTICOAGULATORY ACTIVITY; ANTITUMOR ACTIVITY; ANTIVIRAL ACTIVITY; CYTOTOXIC MACROPHAGE ACTIVATION; HELPER **T CELL**; IMMUNE SYSTEM ENHANCEMENT; **IMMUNOPOTENTIATION**; NATURAL KILLER CELL; **T CELL** DIFFERENTIATION PROMOTION; WOUND HEALING ACTIVITY

ORGANISM: Classifier
Animalia 33000
Super Taxa
Animalia
Organism Name
Animalia
Taxa Notes

Searched by Barb O'Bryen, STIC 2-2518

Animals
REGISTRY NUMBER: **9051-97-2** ((1fwdarw3)-**BETA**-D-**GLUCANS**)

L188 ANSWER 52 OF 63 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1991:504004 BIOSIS
DOCUMENT NUMBER: PREV199192126964; BA92:126964
TITLE: AUGMENTATIVE EFFECT OF POLYSACCHARIDE ON **IMMUNOMODULATION** IN PATIENTS WITH EARLY GASTRIC CANCER THE EFFECT OF INTERFERON-GAMMA PRODUCT ABILITY.
AUTHOR(S): URATA Y [Reprint author]; KUSAMA M
CORPORATE SOURCE: DEP SURG, TOKYO MED COLL, JPN
SOURCE: Journal of Tokyo Medical College, (1991) Vol. 49, No. 4, pp. 517-529.
CODEN: TIDZAH. ISSN: 0040-8905.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: JAPANESE
ENTRY DATE: Entered STN: 12 Nov 1991
Last Updated on STN: 13 Nov 1991

ABSTRACT:It was well known that some of polysaccharides had possessed an ability of anti-tumor effect. β -1, 3-**glucan** (LentinanR) that a typical reagent reside in the action of host defense-surveillance mechanisms against cancer was tested for its capacity to modulate the non-specific immune responses of lymphocytes and the specific immune responses to regional lymph nodes and peripheral blood lymphocytes in the patients with early gastric cancer. β -**glucan** was administered to patients intravenously: (group 1): 2 mg to 14 patients one week before operation, (group 2): 2mg to 26 patients 2 weeks after operation and thereafter 4 mg for every 2 weeks. As a control group 13 gastric cancer patients without β -**glucan** and 15 non-cancer patients were compared. Lymphocyte count, lymphocyte subpopulation (**T** ***cell*** , B cell), PHA stimulating blastformation test, single and two color flow cytometric analysis that tested as the non-specific **immune** ***response*** had tendency of the augmentative effect, but not significant. Interferon-γ production in fresh lymphocytes of regional lymph nodes and peripheral blood that were tested as specific immuno response were significantly augmented by pre- and post-operative administration of . ***beta.*** -**glucan.** These augmenting effects were not dose dependent. Thus, it is likely that some of polysaccharides might be a multiple cytokine inducer with IFN-γ producing ability for early gastric cancer patients. These results suggest that some of the polysaccharides are feasible as an **immuno-modulator.**

CONCEPT CODE: Cytology - Human 02508
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Carbohydrates 10068
Pathology - Therapy 12512
Digestive system - General and methods 14001
Digestive system - Pathology 14006
Blood - Blood cell studies 15004
Blood - Lymphatic tissue and reticuloendothelial system 15008
Endocrine - General 17002
Pharmacology - Clinical pharmacology 22005
Pharmacology - Digestive system 22014
Neoplasms - Immunology 24003
Neoplasms - Pathology, clinical aspects and systemic effects 24004

Neoplasms - Therapeutic agents and therapy 24008
Immunology - General and methods 34502
INDEX TERMS: Major Concepts
Blood and Lymphatics (Transport and Circulation); Endocrine System (Chemical Coordination and Homeostasis); Gastroenterology (Human Medicine, Medical Sciences); Oncology (Human Medicine, Medical Sciences); Pharmacology
INDEX TERMS: Miscellaneous Descriptors
HUMAN **BETA GLUCAN**
ANTINEOPLASTIC-DRUG LYMPHOCYTE RESPONSE IMMUNOTHERAPY
ORGANISM: Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates
REGISTRY NUMBER: 9041-22-9 (**BETA-GLUCAN**)

L188 ANSWER 53 OF 63 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2004053653 EMBASE
TITLE: Modulation of immune response through nutraceutical interventions: Implications for canine and feline health.
AUTHOR: Hayek M.G.; Massimino S.P.; Ceddia M.A.
CORPORATE SOURCE: M.G. Hayek, The Iams Company Research and Devmt., PO Box 189, Lewisburg, OH 45338, United States. hayek.mg@pg.com
SOURCE: Veterinary Clinics of North America - Small Animal Practice, (2004) Vol. 34, No. 1, pp. 229-247. .
Refs: 137
ISSN: 0195-5616 CODEN: VCNAA6
PUBLISHER IDENT.: S 0195-5616(03)00126-8
COUNTRY: United States
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 026 Immunology, Serology and Transplantation
029 Clinical Biochemistry
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20040212
Last Updated on STN: 20040212

ABSTRACT: Mounting research demonstrates that certain nutraceutical compounds interact with the immune system. These interactions may be positive or negative depending on the compound or dose administered to the individual. Understanding the mechanisms by which these compounds work should provide opportunities to design nutritional interventions to bolster the health of dogs and cats.

CONTROLLED TERM: Medical Descriptors:
***immunomodulation**
*immune response
*diet supplementation
cat
animal health
medical research
immune system
dose response
molecular mechanics

animal food
B lymphocyte
macrophage
helper cell
cell activity
Echinacea
garlic
Ginkgo biloba
ginseng
tea
mushroom
exercise
immunity
drug mechanism
inflammation: DT, drug therapy
antineoplastic activity
autoimmune disease: DT, drug therapy
dog
nonhuman
review
Drug Descriptors:
CD4 antigen: EC, endogenous compound
CD8 antigen: EC, endogenous compound
cytokine: EC, endogenous compound
immunoglobulin G: EC, endogenous compound
immunoglobulin A: EC, endogenous compound
immunoglobulin M: EC, endogenous compound
immunoglobulin D: EC, endogenous compound
immunoglobulin E: EC, endogenous compound
tumor necrosis factor: EC, endogenous compound
gamma interferon: EC, endogenous compound
thiamine: CM, drug comparison
thiamine: DT, drug therapy
thiamine: PD, pharmacology
pyridoxine: CM, drug comparison
pyridoxine: DT, drug therapy
pyridoxine: PD, pharmacology
ascorbic acid: CM, drug comparison
ascorbic acid: DT, drug therapy
ascorbic acid: PD, pharmacology
alpha tocopherol: CM, drug comparison
alpha tocopherol: DT, drug therapy
alpha tocopherol: PD, pharmacology
beta carotene: CM, drug comparison
beta carotene: DT, drug therapy
beta carotene: PD, pharmacology
zinc: CM, drug comparison
zinc: DT, drug therapy
zinc: PD, pharmacology
selenium: CM, drug comparison
selenium: DT, drug therapy
selenium: PD, pharmacology
chromium: CM, drug comparison
chromium: DT, drug therapy
chromium: PD, pharmacology
cysteine: CM, drug comparison
cysteine: TO, drug toxicity
cysteine: PD, pharmacology
glutamine: CM, drug comparison
glutamine: DT, drug therapy

glutamine: PD, pharmacology
selenomethionine: CM, drug comparison
selenomethionine: DT, drug therapy
selenomethionine: PD, pharmacology
garlic extract: CM, drug comparison
garlic extract: DT, drug therapy
garlic extract: PD, pharmacology
green tea extract: CM, drug comparison
green tea extract: DT, drug therapy
green tea extract: PD, pharmacology
isoflavone derivative: PD, pharmacology
beta glucan: DT, drug therapy
beta glucan: TO, drug toxicity
beta glucan: PD, pharmacology
Echinacea extract: CM, drug comparison
Echinacea extract: DT, drug therapy
Echinacea extract: PD, pharmacology
genistein: CM, drug comparison
genistein: DT, drug therapy
genistein: PD, pharmacology
Ginkgo biloba extract: CM, drug comparison
Ginkgo biloba extract: DT, drug therapy
Ginkgo biloba extract: PD, pharmacology
ginseng extract: CM, drug comparison
ginseng extract: DT, drug therapy
ginseng extract: PD, pharmacology
unindexed drug

CAS REGISTRY NO.: (immunoglobulin G) 97794-27-9; (immunoglobulin M) 9007-85-6; (immunoglobulin E) 37341-29-0; (gamma interferon) 82115-62-6; (thiamine) 59-43-8, 67-03-8; (pyridoxine) 12001-77-3, 58-56-0, 65-23-6, 8059-24-3; (ascorbic acid) 134-03-2, 15421-15-5, 50-81-7; (alpha tocopherol) 1406-18-4, 1406-70-8, 52225-20-4, 58-95-7, 59-02-9; (beta carotene) 7235-40-7; (zinc) 7440-66-6; (selenium) 7782-49-2; (chromium) 16065-83-1, 7440-47-3; (cysteine) 4371-52-2, 52-89-1, 52-90-4; (glutamine) 56-85-9, 6899-04-3; (selenomethionine) 1464-42-2, 3211-76-5; (genistein) 446-72-0

L188 ANSWER 54 OF 63 EMBASE

ACCESSION NUMBER: 2004219588 EMBASE
TITLE: Chemical and biochemical basis of the potential anti-tumor properties of Ganoderma lucidum.
AUTHOR: Yeung H.W.; Lu Q.-Y.; Zhang Q.; Go V.L.W.
CORPORATE SOURCE: Dr. Q.-Y. Lu, David Geffen School of Medicine, UCLA, 900 Veteran Avenue, Los Angeles, CA 90095, United States. qlu@mednet.ucla.edu
SOURCE: Current Topics in Nutraceutical Research, (2004) Vol. 2, No. 2, pp. 67-77. .
Refs: 55
ISSN: 1540-7535 CODEN: CTNRC3
COUNTRY: United States
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 016 Cancer
017 Public Health, Social Medicine and Epidemiology
026 Immunology, Serology and Transplantation
029 Clinical Biochemistry
030 Pharmacology
037 Drug Literature Index

LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20040604
Last Updated on STN: 20040604

ABSTRACT: Ganoderma lucidum antitumor substances are divided mainly into alcohol-soluble and water-soluble compounds. Chemical studies on the alcohol-soluble, non-polar compounds resulted in the structure determination of some 20 highly oxygenated lanostanoid-type triterpenes of a diverse chemical nature, including acids, aldehydes and alcohols, which were shown to be cytotoxic against a panel of human and murine tumor cell lines. Preliminary studies on the mechanism of action of some of these cytotoxic triterpenes showed that they inhibited cancer cell growth and reduced Ras oncogene activities. Another group of antitumor compounds, namely polysaccharides, were isolated from hot water extracts of Ganoderma lucidum. The antitumor polysaccharides were found to be β-D-glucans, heteroglycans and peptidoglycans; the structures of some of these polysaccharides have been determined. Mechanistic studies indicated that the antitumor polysaccharides do not have direct cytotoxicity against tumor cells, but activate the host immune system to mount an effective cell-mediated antitumor response. Most of the chemical structures of Ganoderma lucidum antitumor triterpenes and polysaccharides have now been characterized, and should be investigated for their respective mechanisms of action on the carcinogenesis pathway as well as their bioavailability and efficacy in the treatment and prevention of cancer.

CONTROLLED TERM: Medical Descriptors:
*malignant neoplastic disease: DT, drug therapy
*malignant neoplastic disease: PC, prevention
biochemistry
antineoplastic activity
Ganoderma lucidum
drug solubility
drug structure
structure analysis
cytotoxicity
cancer cell culture
drug mechanism
growth inhibition
cancer growth
inhibition kinetics
gene activity
drug isolation
immunostimulation
host
cellular immunity
carcinogenesis
drug bioavailability
drug efficacy
sarcoma: DT, drug therapy
sarcoma: PC, prevention
liver cell carcinoma: DT, drug therapy
liver cell carcinoma: PC, prevention
breast cancer: PC, prevention
T lymphocyte
cytokine production
human
nonhuman
mouse
human cell
animal cell

review
Drug Descriptors:
*Ganoderma lucidum extract: AN, drug analysis
*Ganoderma lucidum extract: DT, drug therapy
*Ganoderma lucidum extract: PD, pharmacology
*Ganoderma lucidum extract: PO, oral drug administration
alcohol
water
triterpene derivative: AN, drug analysis
triterpene derivative: DT, drug therapy
triterpene derivative: PD, pharmacology
triterpene derivative: PO, oral drug administration
ganoderic acid: AN, drug analysis
ganoderic acid: PD, pharmacology
ganodermic acid: AN, drug analysis
ganodermic acid: PD, pharmacology
lucidenic acid: AN, drug analysis
lucidenic acid: PD, pharmacology
ganoderiol: AN, drug analysis
ganoderiol: PD, pharmacology
ganodermnonol: AN, drug analysis
ganodermnonol: PD, pharmacology
ganodermanondiol: AN, drug analysis
ganodermanondiol: PD, pharmacology
lucidumol A: AN, drug analysis
lucidumol A: PD, pharmacology
lucidumol B: AN, drug analysis
lucidumol B: PD, pharmacology
aldehyde: AN, drug analysis
aldehyde: PD, pharmacology
ganoderic aldehyde: AN, drug analysis
ganoderic aldehyde: PD, pharmacology
lucialdehyde: AN, drug analysis
lucialdehyde: PD, pharmacology
Ras protein: EC, endogenous compound
polysaccharide: AN, drug analysis
polysaccharide: DT, drug therapy
polysaccharide: PD, pharmacology
polysaccharide: PO, oral drug administration
hot water
beta glucan: AN, drug analysis
beta glucan: DT, drug therapy
beta glucan: PD, pharmacology
beta glucan: PO, oral drug administration
peptidoglycan polysaccharide: AN, drug analysis
peptidoglycan polysaccharide: DT, drug therapy
peptidoglycan polysaccharide: PD, pharmacology
peptidoglycan polysaccharide: PO, oral drug administration
interleukin 1beta: EC, endogenous compound
interleukin 6: EC, endogenous compound
gamma interferon: EC, endogenous compound
tumor necrosis factor alpha: EC, endogenous compound
unclassified drug
CAS REGISTRY NO.: (alcohol) 64-17-5; (water) 7732-18-5; (gamma interferon) 82115-62-6

L188 ANSWER 55 OF 63 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2003398633 EMBASE
TITLE: The influence of β-glucan on immune responses in

broiler chicks.

AUTHOR: Guo Y.; Ali R.A.; Qureshi M.A.
CORPORATE SOURCE: M.A. Qureshi, Department of Poultry Science, North Carolina State University, Raleigh, NC 27695, China.
m_qureshi@ncsu.edu

SOURCE: Immunopharmacology and Immunotoxicology, (2003) Vol. 25, No. 3, pp. 461-472. .
Refs: 27
ISSN: 0892-3973 CODEN: IITOEF
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 026 Immunology, Serology and Transplantation
029 Clinical Biochemistry
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20031023
Last Updated on STN: 20031023

ABSTRACT: Beta-1,3/1,6-glucan (β-glucan) was tested as a possible immunomodulator. Chicken macrophages from a macrophage cell line MQ-NCSU and from abdominal exudate of broiler chickens were exposed to various concentrations of β-glucan in vitro. In addition, day-old broiler chicks were fed a diet containing 0, 20, and 40mg/kg β-glucan in the starter and 0, 20, and 20 mg/kg in the grower diet. Several baseline immune parameters were examined following such exposures. The results showed that β-glucan exposure increased nitrite and interleukin-1 (IL-1) production as well as induced macrophage to proliferate in culture. However, IL-6 production was not affected. Dietary β-glucan supplementation increased the macrophage phagocytic activity, anti-sheep red blood cells antibody response post-boost, as well as the PHAP-mediated lymphoproliferative response measured as a toe-web swelling. The percentage of CD4(+), CD8(+), and CD4 (+)/CD8(+) double positive lymphocytes in the intestinal intraepithelial leukocytes was increased in β-glucan supplemented chicks. Furthermore, the primary and secondary lymphoid organs such as bursa of Fabricius, thymus and spleen were larger in β-glucan-supplemented chicks as compared to the chicks on basal diet. The findings of these studies which showed that β-glucan improves several baseline immune responses in the chicken imply that β-glucan can be used as a possible immunomodulator in food animals such as the chicken.

CONTROLLED TERM: Medical Descriptors:
***immunomodulation**
animal food
immune response
chicken
macrophage
cell line
concentration response
in vitro study
cytokine production
diet supplementation
sheep erythrocyte
phagocytosis
T lymphocyte subpopulation
nonhuman
animal experiment
controlled study
animal tissue
article
priority journal
Drug Descriptors:

***beta glucan: PD, pharmacology**
nitrite
interleukin 1
CD4 antigen: EC, endogenous compound
CD8 antigen: EC, endogenous compound
CAS REGISTRY NO.: (nitrite) 14797-65-0

L188 ANSWER 56 OF 63 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2003134066 EMBASE
TITLE: Relationship between dendritic cells and the D-fraction-induced Th-1 dominant response in BALB/c tumor-bearing mice.
AUTHOR: Harada N.; Kodama N.; Nanba H.
CORPORATE SOURCE: N. Kodama, Department of Microbial Chemistry, Kobe Pharmaceutical University, 4-19-1, Motoyama-kitamachi, Kobe 658-8558, Japan. n-kodama@kobepharma-u.ac.jp
SOURCE: Cancer Letters, (31 Mar 2003) Vol. 192, No. 2, pp. 181-187.
.
Refs: 21
ISSN: 0304-3835 CODEN: CALEDQ
COUNTRY: Ireland
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 016 Cancer
026 Immunology, Serology and Transplantation
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20030410
Last Updated on STN: 20030410

ABSTRACT: Dendritic cells (DCs) are known to not only induce the activation of T cells, but are also associated with the differentiation of T cells. The D-fraction, a β-glucan extracted from maitake (Grifola frondosa) which expresses anti-tumor effects by establishing a helper (Th)-1 dominance in BALB/c mice, enhanced IL-12p70 production by DCs, when the ratio of CD8α(+) DCs to CD8α(-) DCs increased. In addition, examination of the tumor rejection effect of D-fraction-stimulated DCs loaded with tumor antigen revealed that tumor growth is inhibited completely by activating CD4(+) T cells and CD8(+) T cells. .COPYRGT. 2003 Elsevier Science Ireland Ltd. All rights reserved.

CONTROLLED TERM: Medical Descriptors:
*dendritic cell
*tumor rejection
*Th1 cell
*cancer inhibition
antineoplastic activity
cell stimulation
cytotoxic T lymphocyte
cancer graft
cell transplantation
cancer cell culture
protein synthesis
lymphocyte activation
T lymphocyte
nonhuman
female
mouse
animal experiment

Bacteroides fragilis
bacterial membrane
protein modification
protein structure
structure activity relation
abdominal abscess: DT, drug therapy
cellular immunity
host
T lymphocyte subpopulation
antineoplastic activity
antimicrobial activity
cytokine release
Candida albicans
Cryptococcus neoformans
cell interaction
monocyte
macrophage
neutrophil
mushroom
cancer: DT, drug therapy
human
nonhuman
clinical trial
review
Drug Descriptors:
***immunomodulating agent: DV, drug development**
***immunomodulating agent: PD, pharmacology**
*bacterial polysaccharide: DV, drug development
*bacterial polysaccharide: PD, pharmacology
*polysaccharide a: DV, drug development
*polysaccharide a: PD, pharmacology
ampholyte
cell adhesion molecule
cytokine: EC, endogenous compound
krestin: DV, drug development
krestin: PD, pharmacology
peptidoglycan p: CT, clinical trial
peptidoglycan p: DV, drug development
peptidoglycan p: DT, drug therapy
peptidoglycan p: PD, pharmacology
beta 1,3 glucan: DV, drug development
beta 1,3 glucan: PD, pharmacology
mannan: DV, drug development
mannan: PD, pharmacology
hyaluronic acid: DV, drug development
hyaluronic acid: DT, drug therapy
unclassified drug
CAS REGISTRY NO.: (krestin) 66455-27-4; (beta 1,3 glucan) 9051-97-2; (mannan) 51395-96-1, 9036-88-8; (hyaluronic acid) 31799-91-4, 9004-61-9, 9067-32-7

L188 ANSWER 58 OF 63 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2000023855 EMBASE
TITLE: Polymeric drugs based on conjugates of synthetic and natural macromolecules. II. Anti-cancer activity of antibody or (Fab')2-targeted conjugates and combined therapy with immunomodulators.
AUTHOR: Rihova B.; Jelinkova M.; Strohalm J.; Subr V.; Plocova D.; Hovorka O.; Novak M.; Plundrova D.; Germano Y.; Ulbrich K.

animal model
controlled study
animal cell
article
priority journal
Drug Descriptors:
***beta glucan: PD, pharmacology**
***beta glucan: IP, intraperitoneal drug administration**
tumor antigen: EC, endogenous compound
CD8 antigen: EC, endogenous compound
interleukin 12: EC, endogenous compound
protein p70: EC, endogenous compound
CD4 antigen: EC, endogenous compound
CAS REGISTRY NO.: (interleukin 12) 138415-13-1
COMPANY NAME: Yukiguni maitake

L188 ANSWER 57 OF 63 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2000371581 EMBASE
TITLE: Polysaccharide immunomodulators as therapeutic agents: Structural aspects and biologic function.
AUTHOR: Tzianabos A.O.
CORPORATE SOURCE: A.O. Tzianabos, Channing Laboratory, Brigham and Women's Hospital, Harvard Medical School, 181 Longwood Ave., Boston, MA 02115, United States.
atzianabos@channing.harvard.edu
SOURCE: Clinical Microbiology Reviews, (2000) Vol. 13, No. 4, pp. 523-533. .
Refs: 80
ISSN: 0893-8512 CODEN: CMIREX
COUNTRY: United States
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 004 Microbiology
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20001127
Last Updated on STN: 20001127

ABSTRACT: Polysaccharide immunomodulators were first discovered over 40 years ago. Although very few have been rigorously studied, recent reports have revealed the mechanism of action and structure-function attributes of some of these molecules. Certain polysaccharide immunomodulators have been identified that have profound effects in the regulation of immune responses during the progression of infectious diseases, and studies have begun to define structural aspects of these molecules that govern their function and interaction with cells of the host immune system. These polymers can influence innate and cell-mediated immunity through interactions with T cells, monocytes, macrophages, and polymorphonuclear lymphocytes. The ability to modulate the immune response in an appropriate way can enhance the host's immune response to certain infections. In addition, this strategy can be utilized to augment current treatment regimens such as antimicrobial therapy that are becoming less efficacious with the advent of antibiotic resistance. This review focuses on recent studies that illustrate the structural and biologic activities of specific polysaccharide immunomodulators and outlines their potential for clinical use.

CONTROLLED TERM: Medical Descriptors:
***immunomodulation**

CORPORATE SOURCE: B. Rihova, Institute of Microbiology, Academy Sciences Czech Republic, Videnska 1083, 142 20 Prague 4, Czech Republic
SOURCE: Journal of Controlled Release, (2000) Vol. 64, No. 1-3, pp. 241-261. .
Refs: 49
ISSN: 0168-3659 CODEN: JCREEC
PUBLISHER IDENT.: S 0168-3659(99)00140-6
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 016 Cancer
026 Immunology, Serology and Transplantation
027 Biophysics, Bioengineering and Medical Instrumentation
030 Pharmacology
037 Drug Literature Index
039 Pharmacy
052 Toxicology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20000202
Last Updated on STN: 20000202

ABSTRACT: We provide data on in vivo targeting of the Thy 1.2 (CDw90) cell surface receptor expressed on neoplastic T cells, mouse EL4 T cell lymphoma. The targeting antibody and the anticancer drug, doxorubicin (DOX) were conjugated to a water-soluble copolymer based on N-(2-hydroxypropyl)methacrylamide (HPMA) acting as a carrier responsible for controlled intracellular release of the conjugated drug. The in vivo therapeutic efficacy of HPMA copolymer-bound DOX targeted with anti-EL4 antibody, polyclonal anti-thymocyte globulin (ATG), monoclonal anti-Thy 1.2 antibody or its F(ab')2 fragment was compared with the efficacy of DOX conjugated to HPMA copolymer containing nonspecific IgG or bovine serum albumin (BSA). Anti-EL4 antibody-targeted conjugate caused a significant retardation of tumor growth and an extension of the life span of treated mice. The effect was comparable with that of HPMA copolymer-bound DOX targeted with ATG, anti-Thy 1.2 antibody or its F(ab')2 fragment. However, considerable antitumor effect was seen also in conjugates targeted instead of specific antibodies with syngeneic nonspecific IgG or BSA. Patients with advanced cancer are often immunocompromised due to dysfunction of their immune system induced by cancer and cytotoxic drugs. A significant decrease of unwanted side-effects of targeted drugs against a number of vital organs was already documented. In this study we have compared immunotoxic effects of free DOX with those of its antibody-targeted form on NK cells and cytolytic T lymphocytes (CTLs) isolated from C57BL/10 mice bearing EL4 T cell lymphoma. In the same model we have tested the combination therapy with immunomodulators (β-glucan or AM-2) injected together with targeted daunomycin. We have observed a significant protective effect of targeted DOX against NK cells and CTLs. Moreover, the data revealed that combination therapy considerably enhances antitumor efficacy of the targeted anticancer drug. Copyright (C) 2000 Elsevier Science B.V.

CONTROLLED TERM: Medical Descriptors:
*antineoplastic activity
drug targeting
drug conjugation
macromolecule
T cell lymphoma: DT, drug therapy
T lymphocyte
controlled drug release
lifespan
cancer inhibition

cytotoxicity
natural killer cell
cytotoxic T lymphocyte
immunotoxicity
cancer cell culture
nonhuman
male
mouse
animal experiment
animal model
controlled study
animal cell
conference paper
priority journal
Drug Descriptors:
*antibody conjugate: PD, pharmacology
*antibody conjugate: PR, pharmaceutics
*antibody conjugate: DT, drug therapy
*doxorubicin: PD, pharmacology
*doxorubicin: PR, pharmaceutics
*doxorubicin: TO, drug toxicity
*doxorubicin: DT, drug therapy
*doxorubicin: IP, intraperitoneal drug administration
copolymer: PR, pharmaceutics
polymer: PR, pharmaceutics
immunomodulating agent: PD, pharmacology
immunomodulating agent: DT, drug therapy
immunoglobulin F(ab')2 fragment
cell surface receptor: EC, endogenous compound
n (2 hydroxypropyl)methacrylamide: PR, pharmaceutics
drug carrier: PR, pharmaceutics
cancer antibody: PR, pharmaceutics
thymocyte antibody: PR, pharmaceutics
polyclonal antibody: PR, pharmaceutics
bovine serum albumin
immunoglobulin G
beta glucan: PD, pharmacology
beta glucan: DT, drug therapy
beta glucan: CB, drug combination
daunorubicin: PD, pharmacology
daunorubicin: DT, drug therapy
daunorubicin: CB, drug combination
daunorubicin: IP, intraperitoneal drug administration
am 2: PD, pharmacology
am 2: DT, drug therapy
am 2: CB, drug combination
CAS REGISTRY NO.: (doxorubicin) 23214-92-8, 25316-40-9; (n (2 hydroxypropyl)methacrylamide) 21442-01-3; (immunoglobulin G) 97794-27-9; (daunorubicin) 12707-28-7, 20830-81-3, 23541-50-6
CHEMICAL NAME: (1) Am 2
COMPANY NAME: (1) Peregrine pharmaceutical (United States); Farmitalia Carlo Erba (Italy)

L188 ANSWER 59 OF 63 EMBASE
ACCESSION NUMBER: 1999016692 EMBASE
TITLE: Modulation of endotoxin- and enterotoxin-induced cytokine release by in vivo treatment with β-(1,6)-branched β-(1,3)-glucan.

AUTHOR: Soltys J.; Quinn M.T.
CORPORATE SOURCE: M.T. Quinn, Dept. of Veterinary Molecular Biol., Montana State University, Bozeman, MT 59717, United States. mquinn@montana.edu
SOURCE: Infection and Immunity, (1999) Vol. 67, No. 1, pp. 244-252.
.
Refs: 81
ISSN: 0019-9567 CODEN: INFIBR
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
026 Immunology, Serology and Transplantation
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19990128
Last Updated on STN: 19990128

ABSTRACT: Leukocytes activated by endotoxin or enterotoxins release proinflammatory cytokines, thereby contributing to the cascade of events leading to septic shock. In the present studies, we analyzed the effects of in vivo administration of a soluble immunomodulator, β-(1,6)-branched β-(1,3)-glucan (soluble β-glucan), on toxin-stimulated cytokine production in monocytes and lymphocytes isolated from treated mice. In vitro stimulation of lymphocytes isolated from soluble β-glucan-treated mice with lipopolysaccharide (LPS) resulted in enhanced production of interleukin-6 (IL-6) and suppressed production of tumor necrosis factor alpha (TNF-α), while stimulation of these cells with staphylococcal enterotoxin B (SEB) or toxic shock syndrome toxin 1 (TSST-1) resulted in enhanced production of gamma interferon (IFN-γ) and suppressed production of IL-2 and TNF-α compared to that in cells isolated from untreated mice. In vitro stimulation of monocytes isolated from soluble β-glucan-treated mice with LPS also resulted in suppressed TNF-α production, while stimulation of these cells with SEB or TSST-1 resulted in suppressed IL-6 and TNF-α production compared to that in cells isolated from untreated mice. Thus, the overall cytokine pattern of leukocytes from soluble β-glucan-treated mice reflects suppressed production of proinflammatory cytokines, especially TNF-α. Taken together, our results suggest that treatment with soluble β-glucan can modulate the induction cytokines during sepsis, resulting in an overall decrease in host mortality.

CONTROLLED TERM: Medical Descriptors:
*immunomodulation
*leukocyte activation
monocyte
lymphocyte activation
in vivo study
in vitro study
sepsis
toxic shock syndrome
nonhuman
female
mouse
animal experiment
animal model
controlled study
animal cell
intramuscular drug administration
article
priority journal

Drug Descriptors:
*endotoxin
*enterotoxin
*cytokine: EC, endogenous compound
***beta 1,3 glucan**
*immunomodulating agent
escherichia coli lipopolysaccharide
staphylococcus enterotoxin b
interleukin 6: EC, endogenous compound
tumor necrosis factor alpha: EC, endogenous compound
gamma interferon: EC, endogenous compound
interleukin 2: EC, endogenous compound

CAS REGISTRY NO.: (beta 1,3 glucan) 9051-97-2; (staphylococcus enterotoxin b) 39424-53-8; (gamma interferon) 82115-62-6; (interleukin 2) 85898-30-2

COMPANY NAME: Alpha Beta Technology (United States)

L188 ANSWER 60 OF 63 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 94181415 EMBASE
DOCUMENT NUMBER: 1994181415
TITLE: Changes in immune mediators in mouse lung produced by administration of soluble (1→3)-β-D-glucan.
AUTHOR: Sakurai T.; Ohno N.; Yadomae T.
CORPORATE SOURCE: LIMP, Tokyo College of Pharmacy, Horinouchi 1432-1,Hachioji, Tokyo 192-03, Japan
SOURCE: Biological and Pharmaceutical Bulletin, (1994) Vol. 17, No. 5, pp. 617-622. .
ISSN: 0918-6158 CODEN: BPBLEO
COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 015 Chest Diseases, Thoracic Surgery and Tuberculosis
026 Immunology, Serology and Transplantation
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 940720
Last Updated on STN: 940720

ABSTRACT: In this study, we showed that systemic administration of SSG, a highly branched soluble (1→3)-β-D-glucan obtained from Sclerotinia sclerotiorum, induced immunological changes in the alveolar space of mice in vivo, assessed by analysing some immune mediators in bronchoalveolar lavage (BAL) fluid. A single i.v. administration of SSG (250 μg/mouse) induced a rapid but transient leakage of the serum components, IgG and fibronectin, into the alveolar space. This was apparent 12 h post-administration and reached a peak on day 2. Similar kinetic changes were found for lysosomal enzyme activities and interferon γ (IFNγ) concentrations in BAL which are markers of activated alveolar macrophages (AMs) or pulmonary T cells. BAL prepared from SSG-treated mice stimulated lysosomal enzyme release from AMs in vitro. However, SSG did not provoke the chronic accumulation of serum proteins in alveoli and did not induce the release of detectable amounts of nitric oxide and the inflammatory cytokines, IL-1, IL-6 and TNFα, into BAL. However, their mRNAs were detected in lung tissue using the reverse-transcriptase polymerase chain reaction (RT-PCR) technique. Similar results were observed for multiple i.v. administration (250 μg, once a day for 10 consecutive days), and there were a little difference between single and multiple administration. In summary, systemic administration of SSG induces immune responses, including activation of AMs and lymphocytes, but does not provoke chronic inflammation in the alveolar space when administered either as single

or multiple doses. This finding is very important for the clinical application of SSG in immunocompromised hosts as a biological response modifier (BRM) without toxic-side effects on lung tissue.

CONTROLLED TERM: Medical Descriptors:
*immunomodulation
*lung
animal experiment
animal tissue
article
controlled study
intravenous drug administration
lung lavage
lymphocyte activation
macrophage activation
male
mouse
nonhuman
polymerase chain reaction
rna synthesis
Drug Descriptors:
***beta 1,3 glucan: PD, pharmacology**
fibronectin: EC, endogenous compound
gamma interferon: EC, endogenous compound
immunoglobulin g: EC, endogenous compound
lysozyme: EC, endogenous compound

CAS REGISTRY NO.: (beta 1,3 glucan) 9051-97-2; (fibronectin) 86088-83-7; (gamma interferon) 82115-62-6; (immunoglobulin g) 97794-27-9; (lysozyme) 9001-63-2

L188 ANSWER 61 OF 63 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2002-759837 [82] WPIDS
DOC. NO. CPI: C2002-214753
TITLE: New Major Histocompatibility Complex (MHC) molecule construct, useful for treating, preventing, stabilizing or alleviating a disease involving MHC recognizing cells e.g., cancer.
DERWENT CLASS: B04 D16
INVENTOR(S): AMELLEM, O; BUUS, S; PETERSEN, L O; RUUD, E; SCHOLLER, J; WINTHER, L; AAMELLEM, O; RUUB, E; SCHOELLER, J
PATENT ASSIGNEE(S): (DAKO-N) DAKO AS; (DYNA-N) DYNAL BIOTECH ASA; (DAKO-N) DAKOCYTOMATION DENMARK AS
COUNTRY COUNT: 101
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2002072631	A2	20020919	(200282)*	EN	304	C07K014-705
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW						
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW						
NO 2003004020	A	20031106	(200380)			C07K014-705
EP 1377609	A2	20040107	(200404)	EN		C07K014-705
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR						
AU 2002240818	A1	20020924	(200433)			C07K014-705

JP 2005500257 W 20050106 (200505) 439 C07K017-02

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002072631	A2	WO 2002-DK169	20020313
NO 2003004020	A	WO 2002-DK169	20020313
		NO 2003-4020	20030911
EP 1377609	A2	EP 2002-706685	20020313
		WO 2002-DK169	20020313
AU 2002240818	A1	AU 2002-240818	20020313
JP 2005500257	W	JP 2002-571544	20020313
		WO 2002-DK169	20020313

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1377609	A2 Based on	WO 2002072631
AU 2002240818	A1 Based on	WO 2002072631
JP 2005500257	W Based on	WO 2002072631

PRIORITY APPLN. INFO: US 2001-275470P 20010314; DK
2001-435 20010314; DK
2001-436 20010314; DK
2001-441 20010314; US
2001-275447P 20010314; US
2001-275448P 20010314

INT. PATENT CLASSIF.:
MAIN: C07K014-705; C07K017-02
SECONDARY: A61K038-00; A61K038-17; A61K045-00; A61K047-48; A61P001-00; A61P001-04; A61P001-16; A61P003-10; A61P007-00; A61P011-00; A61P011-06; A61P013-08; A61P013-10; A61P013-12; A61P015-00; A61P017-00; A61P017-06; A61P019-02; A61P025-00; A61P029-00; A61P031-00; A61P031-12; A61P035-00; A61P035-02; A61P037-02; A61P037-06; A61P037-08; C07K019-00; C12N005-06; C12N013-00; C12Q001-00; C12Q001-04; G01N033-15; G01N033-50; G01N033-53; G01N033-543; G01N033-566; G01N033-58; G01N033-68; G01N037-00

BASIC ABSTRACT:

WO 200272631 A UPAB: 20021220

NOVELTY - A new Major Histocompatibility Complex (MHC) molecule construct comprising a carrier molecule to which one or more MHC molecules are attached either directly or via one or more entities, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) detecting the presence or MHC recognizing cells in a sample;

(2) monitoring MHC recognizing cells;

(3) establishing a prognosis of a disease involving MHC recognizing cells;

(4) determining the status of, or the effectiveness of a medicament against, a disease involving MHC recognizing cells;

(5) diagnosing a disease involving MHC recognizing cells;

(6) a therapeutic composition comprising as active ingredient a MHC molecule construct;

(7) up-regulating, down-regulating or modulating an **immune response** in an animal, including a human being;

(8) treating an animal, including a human being;

(9) inducing energy of a cell in animal, including a human being;
(10) an adoptive cellular immunotherapeutic method;
(11) obtaining MHC recognizing cells; or
(12) producing a therapeutic composition.

ACTIVITY - Cytostatic; Antiinflammatory; Dermatological; Antiasthmatic; Antidiabetic; Anti-HIV; Virucide; Antiarteriosclerotic; Antiulcer; Antirheumatic; Antiarthritic; Antipsoriatic; Immunosuppressive. No biological data is given.

MECHANISM OF ACTION - Gene therapy.

USE - The MHC molecule construct is useful as a therapeutic composition in in vivo or ex vivo therapy, for treating, preventing, stabilizing or alleviating a disease involving MHC recognizing cells, for monitoring MHC recognizing cells or establishing a prognosis of a disease or diagnosing a disease, or determining the status of a disease or the effectiveness of a medicament against a disease, involving MHC recognizing cells, e.g., chronic inflammatory bowel disease such as Crohn's disease or ulcerative colitis, sclerosis, type I diabetes, rheumatoid arthritis, psoriasis, atopic dermatitis, asthma, malignant melanoma, renal carcinoma, breast cancer, lung cancer, cancer of the uterus, cervical cancer, prostate cancer, brain cancer, head and neck cancer, leukemia, cutaneous lymphoma, hepatic carcinoma, colorectal cancer, bladder cancer, rejection-related disease, Graft-versus-host-related disease, or a viral disease associated with hepatitis, Acquired Immunodeficiency Syndrome (AIDS), measles, pox, chicken pox, rubella or herpes. The MHC molecule construct is also useful for flow cytometric, histological or cytological method (all claimed.)

Dwg.0/57

FILE SEGMENT: CPI
FIELD AVAILABILITY: AB; DCN
MANUAL CODES: CPI: B02-C01; B02-R; B03-G; B04-B01B; B04-B03C; B04-B04C7; B04-C01; B04-C02; B04-C03; B04-E01; B04-F01; B04-G01; B04-H01; B04-H05; B04-K01; B04-L01; B04-N04; B06-H; B07-H; B11-C07B3; B11-C08E; B12-K04A; B12-K04B; B14-A02; B14-C09B; B14-E10C; B14-G02C; B14-H01; B14-K01; B14-N12; B14-N17; B14-S03; B14-S04; D05-H09; D05-H10; D05-H11; D05-H17C

L188 ANSWER 62 OF 63 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2002-519746 [55] WPIDS
DOC. NO. CPI: C2002-147084
TITLE: Novel dietary supplements for use as **immunostimulants**, containing **beta-glucan** and colostrum and/or lactoferrin.
DERWENT CLASS: B04 D13
INVENTOR(S): MCANALLEY, B H
PATENT ASSIGNEE(S): (MCAN-I) MCANALLEY B H; (MANN-N) MANNATECH INC
COUNTRY COUNT: 97
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2002047612	A2	20020620	(200255)*	EN	34	A61K000-00
US 2002119928	A1	20020829	(200259)			A61K038-40

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

AU 2002043267 A 20020624 (200267) A61K000-00

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002047612	A2	WO 2001-US45513	20011025
US 2002119928	A1 Provisional	US 2000-244029P	20001027
		US 2001-1439	20011025
AU 2002043267	A	AU 2002-43267	20011025

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2002043267	A Based on	WO 2002047612

PRIORITY APPLN. INFO: US 2000-244029P 20001027; US 2001-1439 20011025

INT. PATENT CLASSIF.:
MAIN: A61K000-00; A61K038-40
SECONDARY: A61K031-716; A61K031-732

BASIC ABSTRACT:

WO 200247612 A UPAB: 20020829

NOVELTY - Novel dietary supplements containing **beta** -**glucan** and colostrum and/or lactoferrin for supporting and promoting strong immune systems

ACTIVITY - **Immunostimulant.**

MECHANISM OF ACTION - No specific mechanisms given in source material.

USE - The compositions are useful for supporting and promoting strong immune systems. The compositions are useful for providing a first effect comprising regulation of the immune system, regulation of cytokine release, prevention of autoimmune response from intestinal pathogens, promotion of phagocytosis by neutrophils, stimulation of B cell and antibody secretion, inhibition of mast cell enzyme involved in allergic airway response, enhancement of natural killer cell activity, stimulation of muscle protein synthesis, inhibition of muscle protein breakdown, stimulation of wound healing, stimulation of tissue repair, induction of cartilage formation and bone repair, anti-inflammatory effects, bioregulation during trauma stress, enhancement of hematopoietic activity, increase in insulin-like growth factor in tissues, antidiarrheal effect on gastrointestinal tract infection, stimulation of gastrointestinal tract growth, improvement in function of the gastrointestinal tract, promotion of the growth of beneficial gastrointestinal tract bacteria, lowering blood cholesterol, improving **glucose** tolerance, reducing average blood **glucose** in noninsulin dependent diabetics, stimulation of **glucose** uptake by muscles, inhibition of the binding of bacteria to a host tissue, inhibition of the growth of bacteria, protection against viruses, enhancing activity of antibiotics, antifungal effects, anti-amebic effects, prevention of tumor development, inhibition of tumor cell growth or metastasis, enhancement of natural killer cell toxicity to tumors, improvement in Alzheimer's dementia, antioxidant effects and reaction against bacterial toxins.

The composition comprising **beta** -**glucan** and colostrum and/or lactoferrin has a second effect comprising enhancing bile acid excretion, enhancing cholesterol excretion, reducing atherosclerosis, binding heavy metals, stimulation of immune function, resistance to infection, suppression of infection, increase of tissue repair and healing, promotion of body health and athletic performance, promotion of

gastrointestinal tract health, promotion of blood vessel health, promotion of **glucose** utilization and blood sugar balance, improved cancer inhibition, improved metal function and improved toxin related activities (all claimed).

The compositions react with specific cell receptors that cause cells to engulf and destroy bacteria and cellular debris and supplies and enhances natural antibodies. The composition helps regulate the number and activities of circulating immune cells and initiates communication in the immune system which releases chemical messengers to fight infection. The composition supports the immune cell growth and proliferation in the GI tract and binds iron so that it starves bad bacteria, re-routing the iron to be more bio-available for beneficial uses. The composition helps the body remove heavy metals and toxins from cells and help balance the immune system.

ADVANTAGE - The compositions are fast acting, they energize a cascade of immune responses beginning in the mouth and proceeding throughout the body and they optimize the response of natural killer cells B-cells and **T-cells** which seek out and destroy foreign substances.

Dwg.0/0

FILE SEGMENT: CPI
FIELD AVAILABILITY: AB; DCN
MANUAL CODES: CPI: B04-C02D; B04-N06; B14-A02; B14-A03A; B14-C03; B14-E02; B14-E10; B14-F03; B14-F06; B14-F07; B14-G03; B14-H01; B14-J01A4; B14-L01; B14-L06; B14-N01; B14-N17B; B14-S04; B14-S08; D03-H01T2

L188 ANSWER 63 OF 63 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2000-023324 [02] WPIDS
DOC. NO. CPI: C2001-097584
TITLE: Polysaccharide **adjuvant**-antigen conjugates, useful in pharmaceutical compositions and vaccines to enhance and potentiate immune responses.
DERWENT CLASS: B04 C03 D16
INVENTOR(S): MARCIANI, D J
PATENT ASSIGNEE(S): (GALE-N) GALENICA PHARM INC
COUNTRY COUNT: 87
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 9955715	A2	19991104	(200002)*	EN	59	C07H003-04
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW						
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW						
AU 9937676	A	19991116	(200015)			
EP 1073667	A2	20010207	(200109)	EN		C07H003-04
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE						
JP 2002513028	W	20020508	(200234)		67	A61K039-39
AU 760669	B	20030522	(200338)			C07H003-04
US 6573245	B1	20030603	(200339)			A61K031-70

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9955715	A2	WO 1999-US9164	19990428
AU 9937676	A	AU 1999-37676	19990428

EP 1073667	A2	EP 1999-920096	19990428
		WO 1999-US9164	19990428
JP 2002513028	W	WO 1999-US9164	19990428
		JP 2000-545873	19990428
AU 760669	B	AU 1999-37676	19990428
US 6573245	B1 Provisional	US 1998-83106P	19980428
		US 1999-301115	19990428

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9937676	A	Based on	WO 9955715
EP 1073667	A2	Based on	WO 9955715
JP 2002513028	W	Based on	WO 9955715
AU 760669	B	Previous Publ.	AU 9937676
		Based on	WO 9955715

PRIORITY APPLN. INFO: US 1998-83106P 19980428; US 1999-301115 19990428

INT. PATENT CLASSIF.:

MAIN: A61K031-70; A61K039-39; C07H003-04

SECONDARY: A61K039-00; A61K039-02; A61K039-04; A61K039-05; A61K039-07; A61K039-135; A61K039-145; A61K039-165; A61K039-205; A61K039-21; A61K039-23; A61K039-29; A61P031-04; A61P031-10; A61P031-12; A61P031-14; A61P031-16; A61P035-00; A61P037-04; C07H003-06; C08B037-00; C08B037-06

BASIC ABSTRACT:

WO 9955715 A UPAB: 20010620

NOVELTY - Polysaccharide **adjuvant**-antigen conjugates comprising a polysaccharide (I) capable of binding to the surface of antigen presenting cells (APCs) attached to at least 1 molecule with stable carbonyl groups, and at least 1 immunogenic polypeptide or peptide, are new.

DETAILED DESCRIPTION - Polysaccharide **adjuvant**-antigen conjugates comprising:

(i) a polysaccharide capable of binding to the surface of antigen presenting cells (APCs);

(ii) at least 1 molecule with stable carbonyl groups, covalently attached to (I) either directly or via bifunctional linker that keeps the stable carbonyl group intact; and

(iii) at least 1 polypeptide or peptide capable of eliciting an immunogenic response when covalently attached to (I) either directly or via bifunctional linker.

ACTIVITY - Vaccine; immunogenic; **immunopotentiating.**

USE - The conjugate may be used in pharmaceutical compositions and vaccines, to enhance and potentiate immune responses in mammals. The conjugate may be used to target and **co-stimulate** APCs and as vaccine antigens to stimulate **T-cell** immunity.

ADVANTAGE - The conjugate is stable, easy to reproduce and non-toxic.

Dwg.0/0

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB; GI; DCN

MANUAL CODES: CPI: B04-B04C1; B04-C01; B04-C02; B04-K01; B04-N03; B06-A01; B06-B01; B06-D02; B07-A01; B07-B01; B07-D02; B07-D03; B07-D04C; B07-D10; B07-D12; B07-E01; B10-A06; B10-B01A; B10-B01B; B10-B02J; B10-C04D; B10-D01; B10-E02; B14-S11; C04-B04C1; C04-C01; C04-C02; C04-K01; C04-N03; C06-A01;

C06-B01; C06-D02; C07-A01; C07-B01; C07-D02;
C07-D03; C07-D04C; C07-D10; C07-D12; C07-E01;
C10-A06; C10-B01A; C10-B01B; C10-B02J; C10-C04D;
C10-D01; C10-E02; C14-S11; D05-H07

FILE 'HOME' ENTERED AT 13:10:34 ON 03 FEB 2006

=>

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=> d his nofile

     (FILE 'HOME' ENTERED AT 11:33:41 ON 03 FEB 2006)

     FILE 'CAPLUS' ENTERED AT 11:33:55 ON 03 FEB 2006
                SET LINE 250
                SET DETAIL OFF
                E US2003-630143/AP,PRN 25
                SET NOTICE 1000 SEARCH
L1            1 SEA ABB=ON  US2003-630143/AP
                SET NOTICE LOGIN SEARCH
                SET LINE LOGIN
                SET DETAIL LOGIN
                D SCAN
L*** DEL      0 S HUNTER K?/UA
L2          363 SEA ABB=ON  HUNTER K?/AU
L3          110 SEA ABB=ON  GAULT R?/AU
L4          339 SEA ABB=ON  JORDAN F?/AU
L5            3 SEA ABB=ON  L2 AND L3 AND L4

     FILE 'REGISTRY' ENTERED AT 11:37:06 ON 03 FEB 2006
                E CHITIN/CN
L6            1 SEA ABB=ON  CHITIN/CN
                E  N-ACETYLGLUCOSAMINE/CN
L7            1 SEA ABB=ON  N-ACETYLGLUCOSAMINE/CN
                E B(1,6)-GLUCAN/CN
L8            1 SEA ABB=ON  37361-00-5
                D SCAN
                E B-D-GLUCAN, (1.FWDARW.3)/CN
L9            2 SEA ABB=ON  "B-D-GLUCAN, (1.FWDARW.3)-"/CN
L10           2 SEA ABB=ON  GLUCOSE/CN

     FILE 'CAPLUS' ENTERED AT 11:39:53 ON 03 FEB 2006
L11        9870 SEA ABB=ON  GLUCAN#/OBI
L12        2385 SEA ABB=ON  L8 OR L9
L13      185348 SEA ABB=ON  L10
L14        8812 SEA ABB=ON  L6
L15         457 SEA ABB=ON  L7/D
                D SCAN L1
L16           8 SEA ABB=ON  (L2 OR L3 OR L4) AND (L11 OR L12)
                E  T CELL (LYMPHOCYTE)+ALL/CT
                E  "T CELL (LYMPHOCYTE)"+OLD/CT
L17      117300 SEA ABB=ON  T/OBI(L)(CELL# OR LYMPHOCYTE#)/CW
L18       15587 SEA ABB=ON  IMMUNOSTIMULANTS/CT
L19       12883 SEA ABB=ON  B7#/BI
L20       18994 SEA ABB=ON  ADJUVANT#/OBI
                E IMMUNITY+ALL/CT
L21       48414 SEA ABB=ON  IMMUNITY/CT
L22        9283 SEA ABB=ON  IMMUNIZATION/CT
L23       46764 SEA ABB=ON  VACCINES/CT
L24        8960 SEA ABB=ON  IMMUNOMODULATORS/CT
L25           5 SEA ABB=ON  L16 AND ((L17 OR L18 OR L19 OR L20 OR L21 OR L22
                OR L23 OR L24) OR (L13 OR L14 OR L15))
L26          53 SEA ABB=ON  (L11 OR L12) AND L13 AND (L14 OR L15)
L27         646 SEA ABB=ON  (L11 OR L12) AND (L17 OR L18 OR L19 OR L20 OR L21
                OR L22 OR L23 OR L24)
L28           3 SEA ABB=ON  L26 AND L27
L29        1576 SEA ABB=ON  (L11 OR L12)(L)(THU OR BAC OR PAC OR PKT OR
                DMA)/RL
L30          35 SEA ABB=ON  L29 AND L17 AND (L18 OR L19 OR L20 OR L21 OR L22
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                OR L23 OR L24)
L31           3 SEA ABB=ON  L30 AND (L13 OR L14 OR L15)
L32           1 SEA ABB=ON  L28 AND L31
                D SCAN L1
L33          23 SEA ABB=ON  L29 AND L17 AND L18
L34        3489 SEA ABB=ON  COSTIMULA?/OBI OR CO STIMULA?/OBI
L35          13 SEA ABB=ON  L29 AND L17 AND L18 AND ((L19 OR L20) OR L34)
L36           9 SEA ABB=ON  L35 NOT (L1 OR L5 OR L25 OR L28 OR L31)
                D SCAN TI
L37           1 SEA ABB=ON  ENHANCING/TI AND L36
                D SCAN
L38         228 SEA ABB=ON  L29(L)(L19 OR L20 OR L34 OR IMMUN?/OBI)
L39          26 SEA ABB=ON  L38 AND L17
L40          14 SEA ABB=ON  L38 AND L17 AND L18
                E T-CELL/CT
                E E3+AL
                E E3+ALL
                E E2+ALL
L41      100847 SEA ABB=ON  LYMPHOCYTE#/CW(L)T/OBI
L42          12 SEA ABB=ON  L38 AND L17 AND L18 AND L41

     FILE 'MEDLINE' ENTERED AT 11:56:25 ON 03 FEB 2006
L43         383 SEA ABB=ON  HUNTER K?/AU
L44          19 SEA ABB=ON  GAULT R?/AU
L45         301 SEA ABB=ON  JORDAN F?/AU
L46           2 SEA ABB=ON  L44 AND (L43 OR L45)
                D TRIAL 1-2
L47       87690 SEA ABB=ON  GLUCANS+NT/CT
L48       22108 SEA ABB=ON  ADJUVANTS, IMMUNOLOGIC/CT
                E IMMUNOSTIM/CT
                E E4+ALL
L49           1 SEA ABB=ON  (L43 OR L44 OR L45) AND L47 AND L48
L50           8 SEA ABB=ON  (L43 OR L44 OR L45) AND L47
                D TRIAL 1-8
L51        3885 SEA ABB=ON  BETA-GLUCANS/CT OR GLUCANS/CT
L52           4 SEA ABB=ON  (L43 OR L44 OR L45) AND L51
L53        1137 SEA ABB=ON  L51(L)(IM OR ME)/CT
L54          46 SEA ABB=ON  L53 AND L48
                E T-CELL/CT
                E E3+ALL
L55      176666 SEA ABB=ON  T-LYMPHOCYTES+NT/CT
L56           1 SEA ABB=ON  L54 AND L55
L57          16 SEA ABB=ON  L53/MAJ AND L48/MAJ
                D TRIAL 1-16
L58       79475 SEA ABB=ON  LYMPHOCYTE ACTIVATION/CT
L59       34369 SEA ABB=ON  IMMUNIZATION/CT
L60        7525 SEA ABB=ON  VACCINES/CT
L61       93143 SEA ABB=ON  GLUCOSE/CT
L62        3543 SEA ABB=ON  CHITIN/CT
                E N-ACETYLGLUCOS/CT
L63        9797 SEA ABB=ON  GLUCOSAMINE+NT/CT
L64           8 SEA ABB=ON  L51 AND L61 AND (L62 OR L63)
                D TRIAL 1-8
L65           4 SEA ABB=ON  L54 AND L58 AND L48

     FILE 'EMBASE' ENTERED AT 12:10:44 ON 03 FEB 2006
L66         287 SEA ABB=ON  HUNTER K?/AU
L67          15 SEA ABB=ON  GAULT R?/AU
L68         218 SEA ABB=ON  JORDAN F?/AU
L69           0 SEA ABB=ON  L67 AND (L66 OR L68)
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                E BETA-GLUCAN/CT
                E E4+ALL
                E E2+ALL
L70          886 SEA ABB=ON  BETA GLUCAN/CT
L71          691 SEA ABB=ON  (L8 OR L9)
                D TRIAL 1-5
L72          470 SEA ABB=ON  BETA 1,3 GLUCAN/CT
                E BETA 1,6 GLUCAN/CT
L73           38 SEA ABB=ON  BETA 1,6 GLUCAN/CT
L74          221 SEA ABB=ON  L71 NOT (L72 OR L73)
                D TRIAL 1-5
                D SCAN L1

     FILE 'CAPLUS' ENTERED AT 12:13:38 ON 03 FEB 2006
                D SCAN L1
L*** DEL       3 S L66-L68 AND L70-L73

     FILE 'EMBASE' ENTERED AT 12:14:58 ON 03 FEB 2006
L75            1 SEA ABB=ON  (L66 OR L67 OR L68) AND (L70 OR L71 OR L72 OR L73)

                D TRIAL
                E IMMUNOPOTEN/CT
                E E8+ALL
L76        13726 SEA ABB=ON  IMMUNOPOTENTIATION+NT/CT
                D BIB L75
                E IMMUNOMOD/CT
L77         6094 SEA ABB=ON  IMMUNOMODULATING AGENT/CT
                E IMMUNOMODULATION/CT
                E E3+ALL
L78        25681 SEA ABB=ON  IMMUNOMODULATION/CT
                E IMMUNOPOTENTIATING/CT
L79          122 SEA ABB=ON  (L70 OR L71 OR L72 OR L73) AND (L76 OR L77 OR L78)

L80           31 SEA ABB=ON  (L70 OR L71 OR L72 OR L73) AND L76
L81          214 SEA ABB=ON  (L70 OR (L72 OR L73))(L)(DT OR PD OR PK OR AD OR
                DO)/CT
L82           13 SEA ABB=ON  L81 AND L76
                E T-CELL/CT
                E E9+ALL
L83       165379 SEA ABB=ON  T LYMPHOCYTE+NT/CT
L84            2 SEA ABB=ON  L81 AND L76 AND L83
L85           14 SEA ABB=ON  (L70 OR L71 OR L72 OR L73) AND (L76 OR L77 OR L78)
                AND L83
                D TRIAL 1-5
L86            8 SEA ABB=ON  L81 AND (L76 OR L77 OR L78) AND L83
L87       102450 SEA ABB=ON  GLUCOSE/CT
L88         1783 SEA ABB=ON  CHITIN/CT
                E N ACETYLGLUC/CT
                E  N ACETYLGLUCOSAMINE DE/CT
L89         2922 SEA ABB=ON  N ACETYLGLUCOSAMINE/CT OR  N ACETYLGLUCOSAMINE
                DERIVATIVE/CT
L90           10 SEA ABB=ON  (L70 OR L71 OR L72 OR L73) AND L87 AND (L88 OR
                L89)
                D TRIAL 1-10
L91          741 SEA ABB=ON  L70/MAJ OR L72/MAJ OR L73/MAJ
                E LYMPHOCYTE ACTIVATION+ALL/CT
L92        11887 SEA ABB=ON  LYMPHOCYTE ACTIVATION/CT
L93            4 SEA ABB=ON  L91 AND L92
                D TRIAL 1-4
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FILE 'DRUGU' ENTERED AT 12:27:34 ON 03 FEB 2006

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L94          44 SEA ABB=ON  HUNTER K?/AU
L95           2 SEA ABB=ON  GAULT R?/AU
L96           7 SEA ABB=ON  JORDAN F?/AU
L97           1 SEA ABB=ON  (L95 OR L96) AND L94
                D TRIAL
                E BETA GLUCAN/CT
                E BETA-GLUCAN/CT
L98          29 SEA ABB=ON  (L8 OR L9)
                D TRIAL 1-5
                E GLUCAN-BETA-1,3-/CT
L99          80 SEA ABB=ON  GLUCAN-BETA-1,3/CT OR GLUCAN-BETA-1,3-D/CT
                E GLUCAN-BETA-1,6-/CT
L100          2 SEA ABB=ON  GLUCAN-BETA-1,6-D/CT
                E GLUCAN-BETA/CT
L101          4 SEA ABB=ON  GLUCAN-BETA/CT
                E T-LYMPH/CT
                E E4+ALL
L102      17383 SEA ABB=ON  THYMOCYTE/CT
L103          0 SEA ABB=ON  (L94 OR L95 OR L96) AND (L98 OR L99 OR L100 OR
                L101)
L104          4 SEA ABB=ON  (L98 OR L99 OR L100 OR L101) AND L102
                D TRIAL 1-4
L105      35519 SEA ABB=ON  IMMUNOSTIMULANT#/CT
L106      10349 SEA ABB=ON  IMMUNE-RESPONSE/CT
L107      32092 SEA ABB=ON  LYMPHOCYTE/CT
L108      61981 SEA ABB=ON  BIOLOGICAL RESPONSE MODIFIERS/CC
L109         11 SEA ABB=ON  (L98 OR L99 OR L100 OR L101) AND L107
L110         11 SEA ABB=ON  (L98 OR L99 OR L100 OR L101) AND L107 AND (L105 OR
                L106 OR L107 OR L108)
L111          8 SEA ABB=ON  (L98 OR L99 OR L100 OR L101) AND L107 AND ((L105
                OR L106) OR L108)
                D TRIAL 1-4
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FILE 'WPIDS' ENTERED AT 12:36:31 ON 03 FEB 2006

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L112        123 SEA ABB=ON  HUNTER K?/AU
L113         24 SEA ABB=ON  GAULT R?/AU
L114         68 SEA ABB=ON  JORDAN F?/AU
L115          2 SEA ABB=ON  L112 AND L113 AND L114
                D TRIAL 1-2
L116       2241 SEA ABB=ON  GLUCAN#
L117       9860 SEA ABB=ON  IMMUNE RESPONSE
L118      13730 SEA ABB=ON  ADJUVANT#
L119       5852 SEA ABB=ON  IMMUNOSTIMULA?
L120        436 SEA ABB=ON  IMMUNOPOTENTIAT?
L121        483 SEA ABB=ON  COSTIMULA? OR CO STIMULA?
L122       2049 SEA ABB=ON  IMMUN#(W)(STIMULA? OR POTENTIAT? OR MODULAT?)
L123       8323 SEA ABB=ON  IMMUNOMODULAT?
L124       1232 SEA ABB=ON  B7
L125      11598 SEA ABB=ON  T(W)(CELL# OR LYMPHOCYTE#)
L126          2 SEA ABB=ON  (L112 OR L113 OR L114) AND L116 AND (L117 OR L118
                OR L119 OR L120 OR L121 OR L122 OR L123 OR L124 OR L125)
L127         19 SEA ABB=ON  L116 AND L125 AND (L117 OR L118 OR L119 OR L120 OR
                L121 OR L122 OR L123 OR L124)
L128      35231 SEA ABB=ON  GLUCOSE
L129       4807 SEA ABB=ON  CHITIN OR ACETYLGLUCOSAMINE OR ACETYL(W)GLUCOSAMINE

L130          2 SEA ABB=ON  L127 AND L128 AND L129
L131          7 SEA ABB=ON  L127 AND (L128 OR L129)
L132       1272 SEA ABB=ON  BETA(3A)L116
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L133          13 SEA ABB=ON  L127 AND L132
L134           4 SEA ABB=ON  L127 AND L132 AND (L128 OR L129)
L135          19 SEA ABB=ON  L127 AND B/DC
L136          13 SEA ABB=ON  L127 NOT (L130 OR L134 OR L115 OR L126)
                 D TRIAL 1-13
                 D KWIC 1

     FILE 'BIOSIS' ENTERED AT 12:45:04 ON 03 FEB 2006
L137         485 SEA ABB=ON  HUNTER K?/AU
L138          55 SEA ABB=ON  GAULT R?/AU
L139         415 SEA ABB=ON  JORDAN F?/AU
L140           1 SEA ABB=ON  L137 AND L138 AND L139
                 D SCAN
L141         970 SEA ABB=ON  (L8 OR L9)
L142        5632 SEA ABB=ON  GLUCAN#(3A)BETA
L143           5 SEA ABB=ON  (L137 OR L138 OR L139) AND (L141 OR L142)
L144      271754 SEA ABB=ON  T(W)(CELL# OR LYMPHOCYTE#)
L145       86880 SEA ABB=ON  IMMUNE RESPONSE
L146       45803 SEA ABB=ON  ADJUVANT#
L147       18096 SEA ABB=ON  IMMUNOSTIMULA?
L148        1248 SEA ABB=ON  IMMUNOPOTENTIAT?
L149       10288 SEA ABB=ON  COSTIMULA? OR CO STIMULA?
L150       18802 SEA ABB=ON  IMMUNOMODULAT?

     FILE 'STNGUIDE' ENTERED AT 12:47:04 ON 03 FEB 2006

     FILE 'REGISTRY' ENTERED AT 12:55:03 ON 03 FEB 2006
                 E CYCLIC/NTE
                 E BRIDGED/NTE
                 E DISULFIDE/NTE

     FILE 'LREGISTRY' ENTERED AT 12:55:34 ON 03 FEB 2006
L151          95 SEA ABB=ON  DISULFIDE/NTE
L152         144 SEA ABB=ON  BRIDGE/NTE
L153          95 SEA ABB=ON  L151 AND L152

     FILE 'BIOSIS' ENTERED AT 12:58:38 ON 03 FEB 2006
L154        4951 SEA ABB=ON  IMMUN#(W)(STIMULA? OR POTENTIAT? OR MODULAT?)
L155        7672 SEA ABB=ON  B7#
L156          45 SEA ABB=ON  (L141 OR L142) AND L144 AND ((L145 OR L146 OR L147
                 OR L148 OR L149 OR L150) OR (L154 OR L155))
L157      285728 SEA ABB=ON  GLUCOSE
L158       15535 SEA ABB=ON  CHITIN OR  ACETYLGLUCOSAMINE OR ACETYL(W)GLUCOSAMIN
                 E
L159           0 SEA ABB=ON  L156 AND L157 AND L158
L160           2 SEA ABB=ON  L156 AND (L157 OR L158)
                 D SCAN
L161           8 SEA ABB=ON  L142 AND L155
L162           2 SEA ABB=ON  L142 AND L144 AND L155
L163           2 SEA ABB=ON  (L141 OR L142) AND L144 AND L155
L164          20 SEA ABB=ON  (L141 OR L142) AND L144 AND L145
L165           7 SEA ABB=ON  (L141 OR L142) AND L144 AND L146
L166          10 SEA ABB=ON  (L141 OR L142) AND L144 AND L147
L167           3 SEA ABB=ON  (L141 OR L142) AND L144 AND L148
L168           2 SEA ABB=ON  (L141 OR L142) AND L144 AND L149
L169          13 SEA ABB=ON  (L141 OR L142) AND L144 AND L150
L170           2 SEA ABB=ON  (L141 OR L142) AND L144 AND L154
L171           5 SEA ABB=ON  (L141 OR L142) AND L144 AND L145 AND (L147 OR
                 L150)
L172           2 SEA ABB=ON  (L141 OR L142) AND L144 AND (L147 AND L150)
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     FILE 'STNGUIDE' ENTERED AT 13:03:05 ON 03 FEB 2006

     FILE 'CAPLUS' ENTERED AT 13:04:31 ON 03 FEB 2006
               D QUE L1
               D QUE L5
               D QUE L25
L173           5 SEA ABB=ON  L1 OR L5 OR L25

     FILE 'MEDLINE' ENTERED AT 13:04:33 ON 03 FEB 2006
               D QUE L46
               D QUE L62
L174           5 SEA ABB=ON  L46 OR L52

     FILE 'EMBASE' ENTERED AT 13:04:34 ON 03 FEB 2006
               D QUE L75
               D QUE L69

     FILE 'DRUGU' ENTERED AT 13:04:35 ON 03 FEB 2006
               D QUE L97
               D QUE L103

     FILE 'WPIDS' ENTERED AT 13:04:37 ON 03 FEB 2006
               D QUE L115
               D QUE L126
L175           2 SEA ABB=ON  L115 OR L126

     FILE 'BIOSIS' ENTERED AT 13:04:40 ON 03 FEB 2006
               D QUE L140
               D QUE L143
L176           6 SEA ABB=ON  L140 OR L143

     FILE 'STNGUIDE' ENTERED AT 13:05:18 ON 03 FEB 2006

     FILE 'CAPLUS' ENTERED AT 13:05:44 ON 03 FEB 2006
               D QUE L1
               D QUE L5
               D QUE L25
L177           5 SEA ABB=ON  L1 OR L5 OR L25

     FILE 'MEDLINE' ENTERED AT 13:05:46 ON 03 FEB 2006
               D QUE L46
               D QUE L52
L178           5 SEA ABB=ON  L46 OR L52

     FILE 'EMBASE' ENTERED AT 13:05:47 ON 03 FEB 2006
               D QUE L75
               D QUE L69

     FILE 'DRUGU' ENTERED AT 13:05:48 ON 03 FEB 2006
               D QUE L97
               D QUE L103

     FILE 'WPIDS' ENTERED AT 13:05:49 ON 03 FEB 2006
               D QUE L115
               D QUE L126
L179           2 SEA ABB=ON  L115 OR L126

     FILE 'BIOSIS' ENTERED AT 13:05:52 ON 03 FEB 2006
               D QUE L140
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                D QUE L143
L180          6 SEA ABB=ON  L140 OR L143

     FILE 'STNGUIDE' ENTERED AT 13:05:54 ON 03 FEB 2006

     FILE 'MEDLINE, DRUGU, CAPLUS, BIOSIS, EMBASE, WPIDS' ENTERED AT 13:06:33
     ON 03 FEB 2006
L181         11 DUP REM L178 L97 L177 L180 L75 L179 (9 DUPLICATES REMOVED)
                     ANSWERS '1-5' FROM FILE MEDLINE
                     ANSWERS '6-8' FROM FILE CAPLUS
                     ANSWERS '9-11' FROM FILE BIOSIS
                D IALL 1-5
                D IBIB ED ABS HITIND 6-8
                D IALL 9-11

     FILE 'STNGUIDE' ENTERED AT 13:07:02 ON 03 FEB 2006

     FILE 'CAPLUS' ENTERED AT 13:09:14 ON 03 FEB 2006
                D QUE L28
                D QUE L31
                D QUE L42
L182         12 SEA ABB=ON  (L28 OR L31 OR L42)  NOT L177

     FILE 'MEDLINE' ENTERED AT 13:09:16 ON 03 FEB 2006
                D QUE L56
                D QUE L57
                D QUE L65
L183         18 SEA ABB=ON  (L56 OR L57 OR L65) NOT L178

     FILE 'EMBASE' ENTERED AT 13:09:18 ON 03 FEB 2006
                D QUE L86
                D QUE L93
L184         12 SEA ABB=ON  (L86 OR L93) NOT L75

     FILE 'DRUGU' ENTERED AT 13:09:20 ON 03 FEB 2006
                D QUE L111
                D QUE L104
L185         10 SEA ABB=ON  (L111 OR L104) NOT L97

     FILE 'WPIDS' ENTERED AT 13:09:22 ON 03 FEB 2006
                D QUE L130
                D QUE L134
L186          4 SEA ABB=ON  (L130 OR L134) NOT L179

     FILE 'BIOSIS' ENTERED AT 13:09:25 ON 03 FEB 2006
                D QUE L160
                D QUE L163
                D QUE L167
                D QUE L168
                D QUE L170
                D QUE L171
                D QUE L172
L187         13 SEA ABB=ON  (L160 OR L163 OR L167 OR L168 OR (L170 OR L171 OR
                L172)) NOT L180

     FILE 'STNGUIDE' ENTERED AT 13:09:32 ON 03 FEB 2006

     FILE 'MEDLINE, DRUGU, CAPLUS, BIOSIS, EMBASE, WPIDS' ENTERED AT 13:09:58
     ON 03 FEB 2006
L188         63 DUP REM L183 L185 L182 L187 L184 L186 (6 DUPLICATES REMOVED)
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ANSWERS '1-18' FROM FILE MEDLINE
ANSWERS '19-28' FROM FILE DRUGU
ANSWERS '29-40' FROM FILE CAPLUS
ANSWERS '41-52' FROM FILE BIOSIS
ANSWERS '53-60' FROM FILE EMBASE
ANSWERS '61-63' FROM FILE WPIDS

D IALL 1-28
D IBIB ED ABS HITIND 29-40
D IALL 41-63

FILE 'HOME' ENTERED AT 13:10:34 ON 03 FEB 2006

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